



# FEEDBACK

JUNE 1992

NUMBER 27

## EGG SACK-TLY!

*In FEEDBACK No. 26 CHIRP ended up with some egg on its face. Was that a cry of "again"?*

*In the comment printed below the report headed "I'M IN CHARGE...." there were two inaccuracies. Our thanks to those who phoned to point out the errors.*

*The comment on the responsibilities of the Aircraft Commander quoted the Article Number, in the Air Navigation Order, as "31". This was true for many years but in the time between the last check and publication an amendment to the Order had made the relevant number "35(a)".*

*We were also guilty of using a rather inaccurate colloquial turn of phrase to describe the implementation of the Operations Manual of a Company, a Manual which the ANO requires to be provided before the CAA may grant an AOC.*

## TOO FEW CREW NOTICED

Final climb clearance to cruise altitude FL270 given by ATC. After about 15 mins in cruise, controller asked us to check altitude. In an instant I realised QNH still on all altimeters. SOPs require checks on this by all crew members. On this occasion there was myself (handling pilot), First Officer and Flight Engineer who was being line checked by very experienced and senior training engineer! I can only add that all of us are short of practice, about 3 weeks in general between flights this time of year. After take-off ATC held us unusually at 5000 feet Tran Alt being 6000ft.

Can't remember this happening at any other time in my career.

*We have probably all been caught by this at some time. See FEEDBACK No.23, page 6, "HOW HIGH DID YOU SAY?".*

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## METEOROLOGICAL INFORMATION

*There have been several reports about the standard of meteorological information being acted upon by those engaged in aviation, both airborne and chairborne. CHIRP understands that there is active investigation to*

*improve the situation. In the meantime this extract from the Manual of Air Traffic Services may help:*

"As a general rule controllers shall only transmit to aircraft meteorological information that has been supplied, or agreed by, the meteorological office. The exceptions are:

(a) Sudden or unexpected deteriorations of which, in the interests of safety, a controller considers it advisable to warn aircraft immediately and consult

with the meteorological office afterwards.

(b) Information from an aircraft in flight may be passed to other aircraft when a controller considers that it may be useful to them. Whenever this is done the controller shall state that the information originated from an aircraft and the time at which the observation was made. Aircraft reports of meteorological conditions which affect safety, e.g. severe icing or severe turbulence, shall always be passed to other aircraft likely to be affected. Information on severe icing and/or severe turbulence is to be communicated as soon as possible to the meteorological office who will decide whether the conditions warrant the issue of a special report.

(c) Cloud echoes observed on radar. The use for reporting and avoiding weather is described in Section 1, Chapter 5.

(d) Runway visual range observations.

*Those who wish to see the full text will find it in the MANUAL OF AIR TRAFFIC SERVICES Part 1, page 3-7, paragraph 10.*

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## MORE FOOD FOR THOUGHT

RE: FEEDBACK 26, FOOD FOR THOUGHT

We take sarnies.

*Another reporter had a different view:*

I write in support of your correspondent in Feedback 26, who calls for legislation on the subject of crew meals. The position in my company is the same, and the problem is familiar.

What should the crew have done in the circumstances he describes? Should the First Officer have declared himself unfit to fly? Should the Captain have delayed a departure and taken

his crew for a square meal? That would have been a brave decision indeed, as there is usually no "recovery time" in the scheduling, and the problem is greatest when the day is already disrupted by factors such as weather. He would of course be influenced by the fact that jobs are scarce!

Is not the aim of legislation to ensure that flight safety does not depend on the courage of the crew?

Your rather waffling response states that hypoglycaemia is a controversial subject. I remember no such debate when I was in the service and money was not a factor. In any case, there is another side to the problem apart from the physiological effects of missing meals.

Towards the end of a 10 hour multi-sector day without rest or proper refreshment, I find that my crew tend to be tired, bad tempered, and pretty angry about the way they have been treated. Surely this is not a satisfactory state of mind for aircrew to be in, when approaching the limit of their flight duty time allowed under CAP371.

*There is a view within part of the CAA that the factors and personal preferences involved make legislating, for minimum food intake over a set period of time, an impossible task. CHIRP published in FEEDBACK No. 26 the most authoritative information which could be found to provide information on which to base actions and decisions. However, some common sense and mutually advantageous arrangements between airline and crew would seem to be the best solution.*

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## “CAN YOU MAINTAIN TO THE MARKER?”

I was flying a Bizjet into a mountainous European destination airfield, weather was good, bit of cloud about, but had been raining, this was a few months ago so all details are not accurate except flying. ATC controller asked me my speed, I said 250kts, he said maintain it. Also I was very high from, about FL310 descending say to about FL180, I asked to reduce and to descend as I was being vectored to the ILS and I thought I was turning in

too close. As I came down the ILS I saw I was too close and I started to reduce speed. I had to use speed brakes to reduce from 250 to flap, and then gear, limiting speed and at the same time push down hard to get everything in shape for landing. I was visual with field, and got below glide path so I could pull nose up to reduce speed. I got everything in shape at about 2 miles. I was not pleased about the approach and I said that if this was full IFR conditions an accident could have happened. Not being visual no terrain separation could be maintained and because ATC was busy with departing flight, I would have gone around. I would like to ask other Pilots about this for I consider not being allowed to descend earlier and to keep 250kts was totally unprofessional. This was during the busy periods but I consider that foreign ATC will get worse in summer time. Unless something is done there could be another disaster.

I know ATC have problems and we all try to help but when I had to descend the way I did to make a landing and to bleed off speed was not a comfortable approach for my passengers. My Co-Pilot informed me that they always do this at this airfield to get flights in and out quickly but this will only go on for some time before there is a disaster, then the Airfield will be closed.

*There seem to be many cases like this and it does seem that the technology has not kept up with the traffic growth. When you feel that to comply with the requests might hazard your aircraft, do try to give the controller early warning of your requirements. There is usually a mass of other aircraft to fit in and by doing this soon enough some other flexibility can be tried without bringing chaos to the system.*

\* \* \* \* \*

## SOME SUMS

A suggestion regarding altimeter settings, as follows:-

Both QFE & QNH should be acquired by an aircraft prior to landing or, rather, approaching. The difference between these settings should be multiplied by 27 (or 30 if tired!) and compared with the published airfield height. This reduces the

chances of a wrong setting being transmitted or otherwise ending up on the altimeter subscale. I began this practice a couple of decades ago after receiving a "spoonerised" setting from Frankfurt which, on that occasion, was miles out and easily identified as being wrong.

I was very surprised at your reply which was to the effect that the little sum would increase the pilot's workload! I suspect that many lives would have been saved over the years had this check been used. There have been two fatal crashes since I wrote which have involved aircraft at too low an altitude.

This small sum would be made easier if spaces on the flight plan forms for QFE & QNH also catered for the difference between them and result of multiplying this difference by 27 (or even 30 if tired!). This figure would be next to a space for "airfield height". If the difference x 27 and the airfield height were very different then both the altimeter settings should be checked.

It would, of course, still be possible to accept a dud QFE and a dud QNH but I doubt that this double error would occur too often! And if only one setting is given as is sometimes the case then the other should be asked for to enable this check to be made.

QNH mbs. =	
QFE mbs. =	
DIFFERENCE IN mbs =	
Diff. x 30 =	Approx A/F height

*The times 3 applied to the pressure difference in millibars(with a zero added at the end) may not be a difficult sum, but you still have to find time to do it. Two pilot operation seems to mean that both pilots are fully employed performing their individual tasks, in order to comply with the SOP, during the letdown and landing.*

*There is another facet to this problem. The controllers in the USA have been known to pass only the last three digits of the pressure setting, with no mention of the fact that it is in inches and not the millibars which we are used to in the UK. The "995" which you may be given is 29.95 inches and not 995 millibars! With the newly appreciated long range of the twin jets some of you may find yourselves in that unfamiliar environment with all the attendant traps. This sum will bring such an eventuality to your notice. But somebody out there may know of an even better ploy to avoid the traps. Feel free to comment.*

\* \* \* \* \*

## LIGHT ROTORS

*It has been brought to the attention of CHIRP that there have been a number of incidents, some ending in fatalities, involving light rotorcraft. The handling characteristics of any light helicopter or autogyro are affected by the lack of momentum from the inertial forces acting on the rotor. While this does give a more rapid response, and hence more delicate handling, it can also mean that there is virtually no energy to smooth out transitions to autorotation or low speed turns downwind. If either fixed wing handling techniques or those appropriate to larger helicopters are used, due to an inadvertent lapse in concentration, then under these conditions it is impossible to recover the situation. Some of these aircraft have warning devices which alert the pilot to the fact that the aircraft is approaching a problem condition and "these do" give adequate warning when correct action is taken immediately. This report from a third party is an example.*

He seems to have lowered the collective before increasing the revs. instead of the other way round. We hear that this is a particular danger with this light helicopter and that special training is given both in the USA and France, so that this reaction is automatic when the buzzer sounds. It is especially necessary with experienced pilots who have been trained on other machines.

All this is made perfectly clear in the instruction manual.

*So if you are new to any light aircraft, or out of practice on type, do make sure that you understand how it has surprised others in the past before you start experimenting for yourself. They nearly all have some idiosyncrasy in handling.*

\* \* \* \* \*

## HELP IS AT HAND

*To the teller of the "odd tale" posted anonymously.*

*We do not, as you probably realise, publish every report received, and cannot answer you directly as you supply no name and address. Our strong advice is to pluck up the courage to see a general practitioner approved to provide a licence medical. Because diagnosis on the basis of any form of correspondence is impossible, this is the only advice which can be given.*

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## CONFUCIAN COMMUNICATION

Background information - ATIS -> Rwy 28 - 290/7 6000m SN 3/800 8/3000 -1/-2 Trend 5/800. Rwy Wet - Braking Action Good. Rwy 28 is 2800 x 60m of Concrete Asphalt.

I had flown the inbound service. After a turnround of about 1hr with the above ATIS received and departure briefed for a SID at 16.06 GMT we pushed back.

The captain was operating the sector so, as per company operating procedures, he would taxi the aircraft, take off and fly the departure, I would start the engines, operate the RT and handle throttles on T/O.

We pushed back, started engines and taxied out for the full length of Rwy 28. As we approached the 28 hold ATC asked if we would be ready for an

expeditious departure, we said we would. We then spotted lights of an A/C on finals and were cleared to line up behind the landing A/C. We did so - checklists were completed and engines run at a set N1 for 10 seconds for verification of deicing as per manufacturer and company manuals.

While we were still waiting for T/O clearance we believed we heard the landing A/C (a 747 from a Far Eastern airline) call he was "clear of the runway" but this was in poor broken English. We were unable to verify the A/C was clear as he had now disappeared into the murk of snow and mist at the far end of the runway.

We were then cleared for take-off by ATC - our take-off weight gave no V1/VR split and a VR of 126kt - power was set and the take-off run was started normally. At around 110kts ATC started speaking in rushed and heavily accented English mentioning taxi-ways, runways, not clear etc. but no clear STOP, REJECT, ABORT TAKE-OFF.

As I was trying to understand what was being said and to whom I looked up to see, looming out of the snow and mist, a 747 at about 45 degrees to the runway centre line still on the runway! At the same time the captain looked down saw the speed near to VR and expressed we ignore ATC.

At VR I called "rotate" and the aircraft was rotated normally - ATC was then saying more clearly that the runway was not clear - do not take off. I replied "we are now airborne" and switched to departure frequency as per the SID. I would estimate we cleared the 747 by a vertical distance of 500ft.

Around 5 minutes after take-off we were able to talk to the Tower again on our second VHF set. The controller was very apologetic but blaming the 747 for calling clear of the runway while still on it! He also said he was unable to see the aircraft from the tower (we couldn't see it either).

I believe if we had abandoned at around 110kts we would probably not stopped before the 747. If ATC comments at 110kts had been clearer our actions (of continuing) may well have been different!

*For many years ICAO have been trying to find radio communications phrases which are urgent,*

*unambiguous and descriptive of events, to use in situations just like this. However, when an event has such disastrous possibilities there is a tendency for non-native English speakers to lapse into familiar, often used, phrases to convey the information. Beware.*

\* \* \* \* \*

## THE "BE SEEN" SCENE

I flew with a very experienced F/O the other day who, on another flight, had been "told off" for using the "TURN OFF" lights (as an additional see & be seen aid) by the Captain he was flying with. Pity the Captain concerned didn't have the common sense AIRMANSHIP of this F/O. Could you print a piece about "see & be seen" using "ALL" aids.

*It does seem sensible to use the turn off lights as an aid to visibility but do remember that the limits of operation are sometimes different from those of the landing lights.*

\* \* \* \* \*

## MORE MURPHY

A problem which happens every day, but today was especially awkward with severe callsign confusion. A/c on the same frequency were: BMA652, BMA202, BMA252, BMA52, BMA2, DAN152, DAN102. All of these are regulars but also add AMC562 and MNX302. This was approximately 50% of the a/c on frequency and has the potential for disaster. Come on airline schedulers - get together and help the poor ATCOs BEFORE summer arrives.

*Callsign confusion is not the only RT problem as the next report shows.*

I am submitting this report, not as a response to a particular incident, but to address what I perceive to be a growing trend, and no other forum for airing seems appropriate.

There seems to be a "blitz" on callsign confusion

problems at present. These are both the same company, similar number sort (eg AFR901 and AFR921) and the different company, same number sort (eg MXE101 and JEA101).

Of course, we are all instructed to listen to readbacks more carefully etc. but there are other, subtle, clues that can alert an ATCO to a problem. The old days when Air France had French accents and British Airways had English accents have long departed due to wet leasing, overseas recruitment etc., but the voice is still an important cue.

There does, however, seem to be a growing trend for both pilots to share the R/T much more than previously. This may be due to revised flight deck procedures but can result in some bizarre effects for us. For example, this type of exchange has happened to me TWICE WITHIN THE LAST WEEK.

ME - Cliptrain 159 what is your heading?

A/C - (MALE voice) Cliptrain 159 heading 130.

ME - Cliptrain 159, turn right heading 140.

A/C - (FEMALE voice) heading 140, Cliptrain 159.

This sort of thing sets my mental "alarm bells" ringing. In each case there was no possible confusion with light traffic loading, clear and accurate R/T, full callsigns used and English-speaking crews, but add the normal helping of Murphy's Law and yet another "safety net" has been removed.

*This is bound to happen where the airline has a SOP which calls for a change of handling pilot on the descent: the pilot doing the approach handing over to the other who does the landing. However, it would be better for the new RT user to announce the change by using some subtle reference, or the full and correct procedure, on the first contact which would assist the controller to attune the ear. Further suggestions on a postcard please!*

\* \* \* \* \*

## MAN/MACHINE INTERFACE

After six hours of flight, with dawn breaking, the F/O having a pre-planned doze in his seat, I decided to load some more waypoints. I overprinted one of the waypoints in use, realised my mistake, selected heading and re-loaded the original waypoint.

I advised the F/E why I had selected HDG mode and explained the problem of overprinting INS waypoints. But forgot to reselect INS mode. Due to the procedure we adopt for HSI and INS set displays the error was soon noticed by the F/O when he completed his rest (his HSI was showing a large X-track error).

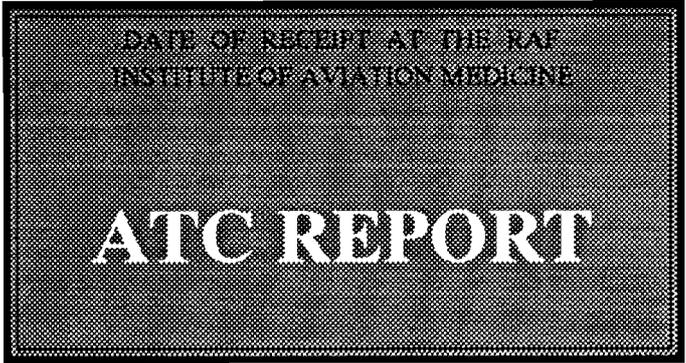
Most people accept that long night flights following disturbed sleep patterns in layover hotels with large

time zone changes lead to drowsiness and reduced awareness on the flight deck, especially at dawn. A case for heavy crew?

*As is often the case this chap has blamed himself for the error made during a routine update of the navigation equipment. Perhaps another crew member would alleviate the problem of awareness, but he is just as likely to be suffering from the same deterioration in performance. Perhaps the modification of the SOP for the update of this equipment would provide another page in the checklist to be monitored and catch this type of error. However, the fundamental error is that the design of the equipment does not cater for what might be called "a natural mapping" of the input and there is insufficient "feedback" from the available display to bring the problem to the attention of the operator. This type of report will help to bring this to the attention of the human factors researchers who are advising designers on the next generation of cockpit equipment.*

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YOURSELF	THE INCIDENT	
HOW LONG AN ATCO	DATE	ATC SERVICE(S) BEING PROVIDED
HOW LONG AT PRESENT UNIT	TIME	IN WHAT TYPE(S) OF AIRSPACE
ON DUTY AS	LOCATION & NEAREST REPORTING POINT	USING WHAT TYPE(S) OF RADAR
HOW LONG VALIDATED ON THIS POSITION	TYPE(S) OF AIRCRAFT INVOLVED	WEATHER
	AIRCRAFT IFR OR VFR	

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YOURSELF	THE FLIGHT	THE INCIDENT
CREW POSITION	DATE	TIME (PLEASE STATE LOCAL/GMT)
TOTAL FLYING HOURS	FROM:-	DAY/NIGHT
HOURS ON TYPE	TO:-	LOCATION
THE AIRCRAFT	IFR/VFR	PHASE OF FLIGHT
TYPE		
No OF CREW	TYPE OF OPERATION	WEATHER (IMC/VMC)

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