



Appendix 2

H.F. Communications over the South Atlantic Region

**Paper prepared by F/O Patrick Flynn ALPA-SA
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1. INTRODUCTION

As is most obvious, H.F. is the primary means of A.T.C. communications over remote areas, but not the most “receiver” friendly. The eventual introduction of F.A.N.S. or a similar system will no doubt cast H.F. aside as the primary means of communication in this type of advisory airspace. F.A.N.S. is however still in its infancy and will take a number of years to be fully established for worldwide operation and even so not all operators may make use of the facility, so it remains vital that an adequate H.F. capability is maintained.

Over the past number of years, South African Airways crews operating over the South Atlantic have experienced difficulties in the quality and use of the regions’ H.F. frequencies. The information contained in this document is a result of surveys conducted spanning various periods by crews operating across the South Atlantic.

The information that is displayed below was gathered over the following periods: 1st January 1999 to 31st March 1999, 1st - 30th September 1999 and 8th February – 31st March 2000 by SAA crews. From this information it is evident that problems exist with the current H.F. coverage in the Brasilia, Buenos Aires and Ezeiza Oceanic F.I.R.’s.

2. RESULTS OF DATA CAPTURED

The survey gathered information regarding F.I.R., Station Callsign, Position, Time and Frequency used. The communications quality was then graded on a 0 – 5 scale.

Note 1: The information below is rated per transmission received at strength “3” or less verses the total number of transmissions attempted.

SAA

<u>FIR</u>	<u>CALLSIGN</u>	<u>QUALITY BELOW STR 3</u> <u>Vs TOTAL CALLS</u>
Johannesburg	JHB. Oceanic	06 // 67 (9%)
<i>Brasilia</i>	<i>Brasilia</i>	<i>55 // 55 (100%)</i>
Recife	Recife Centre	13 // 37 (35%)
Roberts	Roberts Control	03 // 15 (20%)
Abidjan	Abidjan	04 // 15 (27%)
Luanda	Luanda	08 // 27 (29%)
Accra	Accra	03 // 14 (21%)
Buenos Aires	Buenos Aires	01 // 06 (16%)
Ezeiza	Ezeiza	nil relevant data

RESULTS OF SECOND SURVEY 1 – 30 September 1999

SAA

<u>FIR</u>	<u>CALLSIGN</u>	<u>QUALITY BELOW STR 3</u>
Johannesburg	JHB Oceanic	09 // 29 (31%)
<i>Brasilia</i>	<i>Brasilia</i>	<i>23 // 23 (100%)</i>
Recife	Recife Centre	10 // 25 (40%)
<i>Luanda</i>	<i>Luanda</i>	<i>05 // 05 (100%)</i>

RESULTS OF SURVEY 08 FEB – 31 MARCH 2000

<u>FIR</u>	<u>CALLSIGN</u>	<u>QUALITY BELOW STR 3</u>
Johannesburg	JHB Oceanic	15 // 30 (50%)
Ezeiza	Ezeiza Radio	25 // 29 (86%)
Brasilia	Brasilia Centre	09 // 09 (100%)
Buenos Aires	Buenos Aires	04 // 04 (100%)

Note 1: An ALPA Confidential Aviation Deficiency Report was submitted by a crew on the 28 December 1999.

Note 2: The following are comments extracted from various survey forms:

Form 1 – “No HF comms with Ezeiza, relayed all via Springbok JNB. Got VHF comms 250nm from Ezeiza.”

Return flight – “Got comms with Ezeiza on (frequency) 10096 up to KAKIN on the UA557F, thereafter negative comms with Ezeiza. Had to relay via Springbok JNB.”

Form 2 – (Nil contact with Brasilia at 2 reporting points listed on form) “At both positions above 5/5 with JNB Oceanic on (frequency) 21926

Form 4 – (After 5 unsuccessful position reports) “Nil further HF comms until establishing VHF comms at 190 DME”

Form 5 - (**No statistics due to nil comms**) “No HF communication at all with Brasilia Centre on all HF frequencies.” “1st VHF contact approaching position ETANO. All position reports done with Johannesburg oceanic relay”

Form 10 - “JNB Oceanic was unable to reach Brasilia Centre on the landline at time 13:20z..... First contact with Brasilia Centre was within VHF range on 128.4”“Return leg: GRU – JNB...At position ETANO we were instructed to contact Brasilia Centre at 10 (degrees) West on freq. 8855 and 10096. We tried to establish comms on HF at ETANO, no luck! Established comms with JNB Oceanic and Springbok JNB approx. 200nm from GRU.”

3. FINDINGS

1. From the statistics above our findings indicate that most of our communications are in the “Strength 3” area, or “just acceptable”. The most profound problem is that of the **Brasilia** and **Buenos Aires F.I.R.’s** where absolutely **no successful comm’s** are being established, and crews are resorting to either maintaining comm’s with JNB Oceanic or acquiring early contact with Recife Centre as the situation dictates.
2. A possible cause of this problem may be found by referring to the **Jeppesen Text West** manual. In the **En-route section, page SA 21**, it appears as if all the frequencies used for the Oceanic regions are intended for Continental use, and not the South Atlantic, if so, are we being heard at all?

4. CONCLUSION

Two possibilities exist in solving the problem, the first would be to adjust the Brasilia FIR boundaries such that the area in question could be handled by Johannesburg Oceanic and/or Recife Centre. This may however induce financial or political implications.

The second solution is that of improving the relevant South Atlantic Oceanic areas’ HF capability, so as to ensure an acceptable communications quality.

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