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SUBJECT	QSO Procedure for Airplane Reflections		
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Airplane Reflections is the process of reflecting radio waves off the body of an aircraft in flight. Contacts may be made on any of the UHF or Microwaves bands with distances up to 800 kilometres or so away. (*The higher the frequency, the shorter the time you have.*)

As the available time for a QSO in this propagation mode is very brief, usually less than one minute, we need an operating procedure in order to speed up the information exchange. The scheme (not the reporting system) for the "old" MS procedure seems like a suitable model for this purpose.

This procedure is primarily for CW and SSB contacts but may be adapted for other communication modes if required.

Calling

The contact starts with one station calling randomly (CQ), - or in a scheduled QSO: Calling the other station by sending both call signs. A calling sequence should be kept as short as possible.

Reporting system

The report is the standard RS(T) reporting system: 59 or 599.

Reporting procedure

A report is sent when the operator has positive evidence of having received the correspondent's or his own callsign or parts of them. The report should be sent at least twice between each set of call signs. The report must not be changed during a contact even though signal strength or duration might well justify it.

Confirmation procedure

As soon as either operator copies both call signs and a report he may start sending a confirmation. This means that all letters and figures have been correctly received. The message can be pieced together from fragments, but it is up to the operator to ensure that it is done correctly and unambiguously. Confirmation is given by inserting an R before the report.

When one operator receives a confirmation message, such as "R57", and all required information is complete he must confirm with a string of R's, inserting his own call sign after at least 3 R's. When the other operator has received the R's, the contact is complete and he may respond in the same manner.

Requirements for a complete QSO

Both operators must have copied both callsigns, the report and a confirmation that the other operator has done the same. This confirmation can either be an "R" preceding the report or a string of minimum three consecutive "RRR".

And in practice:

If you start calling CQ:

CQ G4ASR ...CQ G4ASR ... CQ G4ASR ... BREAK (or K on CW)

Or starting a scheduled QSO:

SM7ECM G4ASR... BREAK (or K on CW)

When signals are heard insert a conventional tropo report (usually 2 - 3 times)

SM7ECM G4ASR 52 52 52... BREAK (K)

Reply with a confirmation roger report (usually 2 - 3 times)

[G4ASR SM7ECM] R57 R57 R57 ... BREAK (K)

Confirm with a string of rogers (usually 3 times)

[SM7ECM G4ASR] Roger Roger Roger...BREAK (K)

[G4ASR SM7ECM] Roger Roger Roger...BREAK (K)

[Usually QSOs made via Airplane reflections is conducted on random frequencies. As a consequence the callsigns could be eliminated when first copied correctly.]

For contest purposes you have to add the contest exchange i.e. the Locator.

In order to have an accepted standard for QSOs via Airplane Reflections we propose to adapt this procedure in IARU, Region 1, and include the procedure in the VHF Managers Handbook.

FURTHER INFORMATION:

RSGB RadioCommunication Magazine March 2006

RSGB RadioCommunication Magazine April 2006

<http://home.swipnet.se/2ingandlin/ACS.htm>

<http://www.lsear.freemove.co.uk/aircraft%20scatter.html>

<http://sk0ct.se/propagation/flygscatter1.htm>

<http://www.users.bigpond.com/anvdg/ENHANCEMENT%20PAPER%20final.doc>