

AERIAL APPLICATION ASSOCIATION OF AUSTRALIA LTD.

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28 April 2017

AAAA Submission

CASA DP1610AS - Frequency Use at low level in G Airspace

Introduction

AAAA represents over 85 AOC holders and 150 pilot members that constitute a significant proportion of the aerial application sector.

The current requirement for broadcasts and listening watch on area frequencies for pilots at lower levels makes no sense from an aerial application safety or pilot situational awareness perspective.

Critically, aerial application operations take place generally below 1000' AGL (including short distance ferry flights associated with the application) and involve operations from a significant number of airstrips as close as possible to application sites - probably numbering in the *thousands* for larger States. Some companies have as many as 600 airstrips for their own operations. Very few 'agricultural' airstrips are included in publicly available aviation documents.

While there may be issues to be monitored - such as potential clutter on multicom frequencies - a return to the previous safer practice of use of multicomms for low level operations is likely to lead to an improvement in safety.

These issues were previously canvassed by CASA some years ago in the Standards Consultative Committee and AAAA's position, along with many other sectors of industry and especially those operating at lower levels, has been consistent in support for the use of multicomms at lower levels.

AAAA Position

AAAA feels it is a far safer practice for operations in G airspace below 3000' (or lower) for pilots to use the multicom frequency (eg 126.7) to improve the situational awareness of pilots most likely to come into low level airspace proximity.

Discussion

Policy Principles

A return to the use of a multicom frequency for all low level operations would be a significant improvement over current requirements.

Three key policy principles to be considered are:

- a) The availability to all low level pilots of relevant and timely information to support self-separation.
- b) A reduction in irrelevant information to both low level and higher level pilots that only serves to increase frequency congestion, distract, confuse and decay situational awareness.
- c) Safe procedures for ongoing separation and situational awareness at the transition height from low level to higher level operations.

A key threat to these principles is any system that mandates transmissions that serve to complicate, confuse and distract by the provision of unnecessary information that does not serve to improve actionable situational awareness.

The current system appears to fail against all of these critical principles.

Impacts on Higher Level Airspace Users

Many pilots operating at a higher altitude (that thereby ensures there is no likely conflict with lower level users) still receive advice from lower level pilots - leading to a range of potentially poor safety outcomes, including frequency clutter, confusion, distraction and a decrease in situational awareness.

Any requirement to broadcast locations and intentions to higher level airspace users from low level airspace users simply serves to degrade the situational awareness of the higher airspace user by the provision of useless, unactionable information.

If operations are separated by considerable height (say 3000'), there is little likelihood of any operational safety benefit arising from a transmission indicating, for example, an application aircraft has just taken off from a paddock - often unsuitable for any other aircraft or operation - for perhaps the 50th time that day and will be operating at a height beneath the legal operating height of most other aircraft.

However, that same information may be useful to another low-level airspace user in the same area.

Impacts on Lower Level Airspace Users

Pilots operating at lower levels - and especially pilots conducting aerial application operations - depend on both a high level of situational awareness and a clear and undistracted focus on the job at hand to ensure safety.

Dr Tony Kern's book '*Airmanship Redefined*' and the AAAA's '*Aerial Application Pilots Manual*' identify the relationship between focus and distraction as critical to low level safety.

In particular, the compounding effects of active distraction, inattention blindness, poor visual acuity, short-term memory limitations and forgetting, all contribute to powerline strikes during aerial application operations, as identified in various ATSB publications such as '*Aerial Application Safety: 2015-2016 Year in Review*' (ATSB Ref: AR-2016-022) and '*Wirestrikes Involving Known Wires*' (ATSB Ref: AR-2011-028).

An understanding of these issues is critical in comprehending the significant potential safety impact arising from monitoring frequencies that contain largely irrelevant information while at low level - as is the case with current requirements.

AAAA training courses - including the acclaimed '*Wires, HF and CRM Safety Course*' - encourage application pilots to enforce a 'sterile cockpit' approach to reducing potential distraction while actually conducting an operation occurring a few metres above the crop, forest or pasture.

Consequently, any CASA policy that purposely increases potential distractions and actively decays situational awareness at low level is a direct contradiction of sound practice. A policy that requires the monitoring of frequencies more relevant to higher level operations would fall into this negative category.

While similar complications of distraction can also arise from monitoring a multicom frequency, there is a greater likelihood of transmissions on that frequency being relevant to the low level airspace operator.

Good safety practice would be for CASA to ensure that while actually conducting a low-level operation below 100' or thereabouts, application pilots are *exempt* from any requirement to monitor frequencies until they are again at a safe height to do so - allowing them to focus on essential low level hazard management in the treatment area.

Transition from Higher Level Operations to Lower and vice versa

If a pilot transitions from a higher altitude operation (say above 3000') to a lower altitude - as would be expected on a descent/ approach to an aerodrome for landing - then clearly they should establish a listening watch and broadcast intentions on the relevant multicom or CTAF frequency to achieve appropriate situational awareness and establish communications with other users in the area to maintain separation. The same would work for climbing aircraft.

Managing Frequency Congestion

While there are genuine issues that may arise from time to time and in particular locations regarding frequency congestion on multicom frequencies, the overall improvement in safety is likely to be greater from ensuring that higher level airspace users are not compromised by constant chatter from a lower level multicom and that lower level airspace users similarly receive more relevant transmissions.

Potential multicom congestion can be addressed through RAPACs or other reporting mechanisms to CASA, as well as CASA feedback from their own staff or Associations such as AAAA. If identified, frequency congestion could then be addressed by practical means such as using different frequencies for particular areas, although this would potentially diminish the simplicity, utility, appeal and increased safety of a common frequency such as 126.7.

Confusion Regarding Current Procedures

A less acknowledged threat of the current situation is its widespread lack of understanding and variable implementation of current procedures across many classes of pilots - it is likely that many are continuing to use the 'older' system of broadcasting on a local frequency when at lower levels. While this perhaps more 'common sense' approach may serve some purposes, it raises the prospect of not everyone working to the same system and potentially relevant transmissions either not being made or not received due to frequency selection.

Whatever action CASA decides to take as a result of this DP, it is critical that a significant education campaign is mounted to ensure the 'new' system is appropriately embedded and simple advice and procedures are available to all pilots.

Defining 'aerodrome/landing area' implications

A critical element in any CASA policy in the use of radio frequencies is the definition of 'aerodrome' or 'landing area' that would trigger the need for broadcasts that could conceivably add to unnecessary frequency congestion.

AAAA is strongly of the view that any CASA regulations or policy in this regard should **exempt** aerial application and similar operations from any requirement to broadcast when operating from an agricultural strip which can often be isolated, remote from other aircraft and privately owned.

Rather than mandate calls - that could easily number in their *hundreds* from each application aircraft over a single day's operations - application pilots could simply keep a listening watch when at a safe height on the appropriate multicom frequency and respond to any other relevant traffic as required.

Any attempt to capture aerial application operations in a mandatory call regime, with their inherent high number of cycles per day, will inevitably lead to frequency overload.

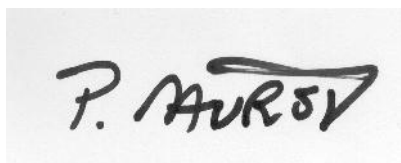
Other Issues

As an aside, many aerial application aircraft are also fitted with UHF radio to permit communications with ground staff and clients, which serves to remove unnecessary chatter from VHF frequencies while contributing to enhanced situational awareness for application operations such as the identification of ground hazards, susceptible crops etc.

Further Information

If further information on or explanation of this submission is required, please do not hesitate to contact AAAA on 02 6241 2100.

Yours sincerely

A handwritten signature in black ink on a light background. The signature reads "P. HURST" in a cursive, slightly stylized font. The first letter "P" is large and prominent, followed by a period and the name "HURST".

Phil Hurst
CEO - AAAA