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Australian Transport Safety Bureau

Near collision involving an Evektor Sportstar 24-4467, and a PA28R Piper Arrow, VH-KGP

Wollongong Airport, New South Wales, 7 September 2014

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Aviation Occurrence Investigation
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Addendum

Page	Change	Date

Near collision involving an Evektor Sportstar 24-4467, and a PA28R, Piper Arrow, VH-KGP

What happened

Piper Arrow, VH-KGP

Source: Airliners.net: Andrei Bezmylov

On 7 September 2014 at 1303 Eastern Standard Time, a Piper Arrow PA28R-200 aircraft, registered VH-KGP, was completing a private, visual flight rules (VFR) flight from Orange to Wollongong, New South Wales. On board were a pilot and one passenger.

Due to low cloud over the southern highlands, the pilot had diverted north of the direct track, in order to remain visual. When about 10 NM to the north of Wollongong, the pilot broadcast an inbound call on the common traffic advisory frequency (CTAF) (Table 1). At the time, an instructor and student in an Evektor Sportstar aircraft, registered 24-4467 (4467) (Figure 1) were one of two aircraft conducting circuit training at Wollongong.

The instructor and student in 4467 heard the pilot of KGP call inbound, and, although they did not communicate directly with the pilot of KGP, they broadcast their aircraft position and intentions (Table 1), making it clear that they were established in the circuit. Noting that runway 34 was in operation, the pilot of KGP began to manoeuvre the aircraft onto an oblique extended downwind leg (Figure 2).

The crew of the two aircraft remained in communication, although the exact position of KGP was not established until it was sighted at 1306.

An extract from the Wollongong CTAF recording, from the time the pilot of KGP made the 10 NM inbound call up until the aircraft turned base as number 1 to land, is reproduced in Table 1.

Figure 1: Sportstar 24-4467

Source: Airliners.net: Andrei Bezmylov

Table 1: Wollongong CTAF recording extract

Time	Aircraft	Transmission content
1303	KGP	All stations Wollongong, KGP an Arrow 10NM inbound from the north maintaining 2,000 ft.
1303	4467	Wollongong traffic Sportstar 4467 base 34 for a touch and go, Wollongong
1304	4467	Wollongong traffic Sportstar 4467 turning final 34, touch and go, Wollongong
0305	Unknown	Very short transmission - unreadable
0305	Unknown	Short transmission – unreadable (4 seconds after last transmission)
0305	Unknown	That was a right circuit for runway 34
0306	Other circuit traffic	Position and intentions in the circuit
1306	KGP	And Traffic Wollongong, KGP early downwind runway 34
1306	4467	"KGP this is Sportstar 4467, we have just turned downwind for runway 34; ah we are in your 12 o'clock, have you got us sighted yet?"
1306	KGP	"KGP is 900 ft, we have just avoided an aircraft taking off from 34, KGP "
1307	4467	"4467 we are established in the circuit, turning downwind, we will manoeuvre and be number two to you"
1307	KGP	KGP copied that, thanks for that"
1307	Other circuit traffic	"KGP, just confirm your height for us"
1307	KGP	"KGP is number one for runway 34, it will be a full stop"
1307	4467 and other traffic	Discussion on closeness of KGP and 4467
1308	KGP	KGP turning base runway 34

Figure 2: Approximate flight paths of KGP and 4467

Source: Google earth and ATSB

When 4467 was on the crosswind leg for a right circuit for runway 34 (Figure 2), the crew noted KGP on their left, about 100 m ahead and at about the same level as them. KGP was about 800-900 ft above ground level on an oblique approach to the downwind leg. The pilot in KGP was still visually searching for 4467 as he joined the extended leg of the circuit and began to descend.

Concerned about the proximity and current track of KGP, the instructor in 4467 initiated a climbing turn. Shortly after, KGP passed underneath and just behind 4467. KGP continued to descend on downwind, and 4467 manoeuvred to allow KGP to be first in the sequence to land.

KGP landed and vacated runway 34; 4467 conducted a go-around and then completed another couple of circuits prior to landing.

Pilot comments (24-4467)

The instructor commented that although they had heard the 10 NM inbound call from KGP at 1303, no estimate for arrival in the circuit was given. Hence they were not expecting the aircraft to arrive as early as it did; nor join the circuit from the oblique angle that it did. KGP joined the circuit on the inside of the circuit being flown by 4467.

Pilot comments (VH-KGP)

The pilot of KGP had flown into Wollongong airport on many previous occasions. He commented that the weather was more challenging than normal on this day, and he had to manoeuvre to keep the aircraft in visual conditions.

He also recalled making either a 5 NM or 3 NM inbound call. Table 1 shows that there were two unreadable short calls two minutes after the 10 NM broadcast, but due to the static interference, the ATSB was unable to decipher the calls.

The pilot also reported that he usually switches between the headphone and speaker selections on the KMA20 audio panel as he likes to keep the passengers involved in proceedings. He stated it is possible that he may have had an incorrect combination of switches set at some stage during the arrival into Wollongong.

Safety message

This incident highlights the importance of using standard phraseology, and making extra calls when there is any uncertainty regarding another aircraft's position when operating at non-controlled airports. As well as the regulated requirement for broadcasting, it is good airmanship to do so, considering the limitations of the See-and-Avoid Principle.

CASA CAR 166C outlines the broadcasting responsibilities for pilots at non-controlled airports. Also, CASA has recently updated the related Civil Aviation Advisory Publication, CAAP 166-1 and 2. This is available at: www.casa.gov.au/scripts/nc.dll?WCMS:STANDARD::pc=PC_100058

CAR 166 also contains a note directing pilots to the Aeronautical Information Publication (AIP) for the recommended format for broadcasting at non-controlled airports. AIP ENR 1.1 46, 47 give a summary of these broadcasts. This is available at: www.airservicesaustralia.com/publications/

ATSB SafetyWatch highlights the broad safety concerns that come out of our investigation findings and from the occurrence data reported to us by industry. One of the safety concerns is safety around non-towered (non-controlled) aerodromes www.atsb.gov.au/safetywatch/safety-around-aeros.aspx.

ATSB's research report, *Limitations of the See-and Avoid Principle* is available at www.atsb.gov.au/publications/2009/see-and-avoid.aspx.

General details

Occurrence details

Date and time:	07 September, 2014 2009 – 1245 EST	
Occurrence category:	Serious incident	
Primary occurrence type:	Near collision	
Location:	Wollongong Airport, New South Wales	
	Latitude: 34° 33.67' S	Longitude: 150° 47.32' E

Aircraft details

Manufacturer and model:	Evektor Aerotechnik SPORTSTAR	
Registration:	24-4467	
Serial number:	2005 0403	
Type of operation:	Flying training - dual	
Persons on board:	Crew – 2	Passengers – Nil
Injuries:	Crew – Nil	Passengers –N/A
Damage:	Nil	

Aircraft details

Manufacturer and model:	Piper Aircraft Corporation PA28R-200	
Registration:	VH-KGP	
Serial number:	28R-35611	
Type of operation:	Private - Pleasure	
Persons on board:	Crew – 1	Passengers – 1
Injuries:	Crew – Nil	Passengers – Nil
Damage:	Nil	

About the ATSB

The Australian Transport Safety Bureau (ATSB) is an independent Commonwealth Government statutory agency. The ATSB is governed by a Commission and is entirely separate from transport regulators, policy makers and service providers. The ATSB's function is to improve safety and public confidence in the aviation, marine and rail modes of transport through excellence in: independent investigation of transport accidents and other safety occurrences; safety data recording, analysis and research; and fostering safety awareness, knowledge and action.

The ATSB is responsible for investigating accidents and other transport safety matters involving civil aviation, marine and rail operations in Australia that fall within Commonwealth jurisdiction, as well as participating in overseas investigations involving Australian registered aircraft and ships. A primary concern is the safety of commercial transport, with particular regard to fare-paying passenger operations.

The ATSB performs its functions in accordance with the provisions of the *Transport Safety Investigation Act 2003* and Regulations and, where applicable, relevant international agreements.

The object of a safety investigation is to identify and reduce safety-related risk. ATSB investigations determine and communicate the safety factors related to the transport safety matter being investigated.

It is not a function of the ATSB to apportion blame or determine liability. At the same time, an investigation report must include factual material of sufficient weight to support the analysis and

findings. At all times the ATSB endeavours to balance the use of material that could imply adverse comment with the need to properly explain what happened, and why, in a fair and unbiased manner.

About this report

Decisions regarding whether to conduct an investigation, and the scope of an investigation, are based on many factors, including the level of safety benefit likely to be obtained from an investigation. For this occurrence, a limited-scope, fact-gathering investigation was conducted in order to produce a short summary report, and allow for greater industry awareness of potential safety issues and possible safety actions.