National Transportation Safety Board
Aviation Accident Factual Report

Location:	Lansing, IL	**Accident Number:**	CHI03LA048
Date & Time:	01/01/2003, 1430 CST	**Registration:**	NONE
Aircraft:	Air Command Commander Elite	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

HISTORY OF FLIGHT

On January 1, 2003, at 1430 central standard time, an un-registered, amateur-built, Air Command gyrocopter was destroyed after a loss of control while maneuvering in the traffic pattern at the Lansing Municipal Airport, Lansing (IGQ), Illinois. The gyrocopter was reported to have taken off to the north from a north/south taxiway. The un-certified pilot was fatally injured. The flight was conducted under the provisions of 14 CFR Part 91 and was not on a flight plan. Visual meteorological conditions prevailed at the time of the accident. The local flight had just originated when the accident occurred.

According to a written statement by a witness who had 28 years experience building and flying gyroplanes, he observed the gyrocopter takeoff from what appeared to him as the new north/south taxiway. He stated the gyrocopter appeared to heading north and climbing. The witness reported that before reaching the east/west runway the gyrocopter made a turn to a westerly heading. He estimated the altitude at 50 feet. The witness stated that as the gyrocopter passed in front of him it climbed to approximately 100 feet. The witness stated that within seconds he observed the gyrocopter transition into an abrupt climb, which quickly turned into a nose down attitude. The witness reported that the gyrocopter made a quick descent followed by an even faster climb. The gyrocopter then nosed over and tumbled to the ground. The witness stated "In my observation this scenario appeared to be a classic phugoid oscillation of increasing amplitude referred to as "pilot induced oscillation" or PIO."

The FAA-H-8083-21 Rotorcraft Flying Handbook refers to PIO as "an unintentional up-and-down oscillation of the gyroplane accompanied with alternating climbs and descents of the aircraft. PIO is often the result of an inexperienced pilot overcontrolling the gyroplane, but this condition can also be induced by gusty wind conditions. While this condition is usually thought of as a longitudinal problem, it can also happen laterally."

MEDICAL AND PATHOLOGICAL INFORMATION

The final forensic toxicology fatal accident report from the Federal Aviation Administration

showed no cyanide; no ethanol: and 60.77 (ug/ml, ug/g) Salicylate detected in blood. Salicylate is commonly known as aspirin.

An autopsy was performed by the Cook County Medical Examiner's Office, Cook County, Illinois.

WEATHER INFORMATION

At 1425 the weather at IGQ was reported as: Wind 020 degrees at 16 knots and gusts at 21 knots; visibility 10 statute miles; sky condition overcast at 2,100.

ADDITIONAL INFORMATION

According to the Commander Elite website, the gyrocopters' empty weight is listed as 300 pounds. FAR part 103.1 states that for a vehicle to be considered an ultra light it must weigh less than 254 pounds empty weight, excluding floats and safety devices.

Pilot Information

Certificate:	None	**Age:**	45, Male
Airplane Rating(s):	None	**Seat Occupied:**	Center
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	None None	**Last FAA Medical Exam:**	
Occupational Pilot:		**Last Flight Review or Equivalent:**	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Air Command	**Registration:**	NONE
Model/Series:	Commander Elite	**Aircraft Category:**	Gyroplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:		**Serial Number:**	
Landing Gear Type:	Tricycle	**Seats:**	1
Date/Type of Last Inspection:	Unknown	**Certified Max Gross Wt.:**	
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Rotax
ELT:	Not installed	**Engine Model/Series:**	532
Registered Owner:	On file	**Rated Power:**	65 hp
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	**Condition of Light:**	Day
Observation Facility, Elevation:	IGQ, 616 ft msl	**Distance from Accident Site:**	0 Nautical Miles
Observation Time:	1425 CST	**Direction from Accident Site:**	0°
Lowest Cloud Condition:	Unknown	**Visibility**	10 Miles
Lowest Ceiling:	Overcast / 2100 ft agl	**Visibility (RVR):**	
Wind Speed/Gusts:	16 knots / 21 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	20°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	-1°C / -4°C
Precipitation and Obscuration:			
Departure Point:	Lansing, IL (IGQ)	**Type of Flight Plan Filed:**	None
Destination:	Lansing, IL	**Type of Clearance:**	None
Departure Time:	1430 CST	**Type of Airspace:**	Unknown

Airport Information

Airport:	Lansing Municipal Airport (IGQ)	**Runway Surface Type:**	Grass/turf
Airport Elevation:	616 ft	**Runway Surface Condition:**	Unknown
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	N/A	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	41.539722, -87.531944

Administrative Information

Investigator In Charge (IIC):	John M Brannen
Additional Participating Persons:	Robert Donahue; West Chicago, Illinois; West Chicago, IL
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov, or at 800-877-6799. Dockets released after this date are available at http://dms.ntsb.gov/pubdms/.