PRO FOOTBALL HALL OF FAME
ENSHRINEMENT FESTIVAL

CELEBRATING EXCELLENCE!

BALLOON CLASSIC & FIREWORKS

BALLOONING 101

JULY 27, 28, & 29, 2018

Welcome to the 2018 Pro Football Hall of Fame Enshrinement Festival Balloon Classic & Fireworks.

You are about to embark on an exciting adventure in a hot air balloon! As a passenger you will not only enjoy the hot air balloon ride experience, but you will also become an important member of the pilot's "crew." This involves assisting the pilot for takeoff during the actual flight and for landing procedures. It is an exciting and significant role for which you must be prepared. Safety comes first, always, so please read all of the enclosed information carefully. The following information is provided to give you an idea of balloon components and operations in order to increase your understanding of a hot air balloon so that you can enjoy your flight even more! This text supplies the minimum knowledge requirements for flight crews throughout the ride. We hope you have a great time!

Some Background…

The Hot Air Balloon consists of the following components:

Basket: Where the pilot and passengers are held. It also supports the burner system, which is installed overhead at the top of the basket.

Envelope: The actual balloon part of a hot air balloon. It is usually very colorful and is generally made of rip-stop nylon although some balloon fabric is polyester. Envelopes are available in a number of sizes. The most common sizes at balloon events hold 60,000 to 80,000 cubic feet of hot air! By far the most common top in an envelope is the "parachute top." The parachute top allows for the rapid release of hot air allowing for quick descents and is also deployed at the time of landing.

Burner: The burner is what heats the air inside the envelope; it is like the engine of the balloon which makes the balloon move upwards into the air. There are many different types and models of burners but overall they all accomplish the same thing – heating the air in the envelope. The power of these burners is stated in BTU's, short for British Thermal Unit. A double burner system can generate 32,000 BTU's.

Instruments: Four additional instruments are normally carried in a balloon:

- Altimeter – a devise to tell how high the balloon in flying; determines elevation.
- Variometer – gives the rate of ascent and descent
- Temperature Meter – shows the temperature at the top of the envelope
- GPS – used for navigational purposes

Just like a commercial airliner, each balloon has a licensed pilot. The pilot is the person in command of the balloon flight and during the flight is known as the PIC or "Pilot in Command." All flight crew must take their instructions from the pilot during flight preparations and the flight. It is normal for all flight crew to be briefed on their duties prior to take-off. It is sometimes necessary to give additional duties while in the air or change the original duties as required by the flight. DO NOT touch anything unless asked by the PIC (pilot in command).

The Fuel System and Burner

Modern hot air balloons use propane as a fuel source. The vapor is highly flammable and the liquid can cause severe freeze burns in the process of vaporizing if proper precautions are not used; however, typically this fuel is very safe. The propane is stored in cylinders, which are kept in the balloon basket, along with the passengers and the pilot. The propane is highly compressed in canisters and flows to the burner in liquid form. When the pilot opens the propane tank and burner valves, the propane flows to the burner and is ignited by a pilot light. As the flame burns, it heats up the metal in the surrounding tubing and when the tubing becomes hot it heats the propane flowing through it. This process changes the propane from a liquid to a gas before it is ignited. The gas makes for a more powerful flame and an overall more efficient fuel consumption.

Flight Crew Responsibilities

Appropriate attire is required for your flight. Long pants and sturdy shoes are suggested. **Open toe shoes, high heels, purses, or excessive carry-on baggage are not permitted.** Cameras are permitted, but the pilot and the Enshrinement Festival assume no responsibility for loss, damage, or theft of personal items.

Flight crew must be physically able to perform duties that maybe required of them during the flight and/or landing.

Federal Aviation Regulations (FAR's) prohibit pilots and crew from consuming alcohol within eight (8) hours of flight operations. Smoking is not permitted at the launch site or during flight.

Your flight will be a new and interesting experience. Observe the pilot's actions while flying. Especially take note of how he vents to release some of the hot air.

The pilot will probably ask for assistance in looking for power lines. Power lines are by far the greatest hazard when flying at low altitudes in a balloon. You should assist the pilot in looking for any power lines, and warn him when you see any.

During the flight, the pilot may also ask you to keep a lookout for cattle, horses and other animals that could be spooked when the balloon is flying at low altitude. Most modern burners have an auxiliary burner, which is known as a "whisper burner." The pilot will probably use this burner when close to animals.

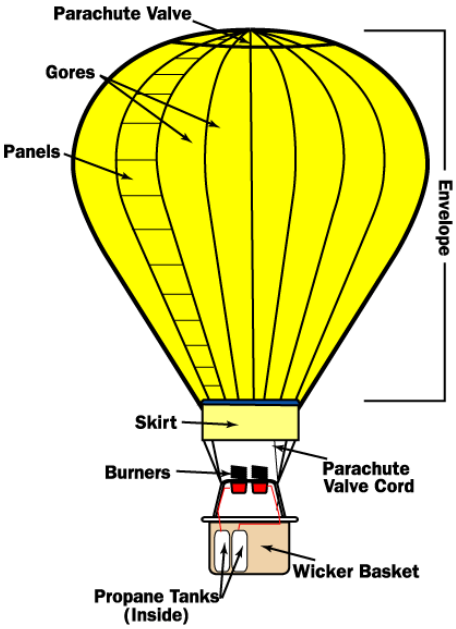
All flight crew should be familiar with basic hot air balloon operations, the various components of a hot air balloon, and basic emergency procedures. The number of persons that can be carried in a hot air balloon basket during flight depends on several factors:

- The size of the basket
- The size of the envelope
- The weight of the crew
- The ambient temperature
- The altitude to be flown

Flight Briefing

You will receive a flight safety briefing at the Kent State University at Stark Conference Center prior to your sponsor flight on Friday evening. **Please arrive in plenty of time to park and ensure your presence at the required safety briefing.**

THANK YOU FOR COMPLYING AND HAVE A WONDERFUL FLIGHT!



Hot Air Balloon Components

Single Burner and Burner Frame

Quick Release for Controlled Launches

Fuel Tank and Hoses

Pibals Ready for Launch

Inflator Fan

Balloon Mouth (Throat) During Cold Inflation

Photos courtesy Ca-Zoo Balloon Team http://www.cazooee.com/