

# TANDEM

## Newsletter

ISSUE 38, FEBRUARY 2011

This newsletter is written for:

Packers, Riggers, DZ Operators, Strong Tandem Instructors & Strong Tandem Examiners.

Your comments are welcome.

### In This Issue

Page 1

#### ON THE COVER

- Strong Enterprises 50th Anniversary
- Trivia Question

Page 2

- \$210,000 Judgement Against Tandem Instructor
- C-47 Tico Belle, One of WWII's Most Respected Warbirds
- Florida Taxes Impact on DZs

Page 3

- 10 Things to Ask Your Potential Tandem or AFF Student

Page 4

- Tandem Standardization
- Bag Lock on a Dual Hawk Tandem System?

## STRONG ENTERPRISES 50<sup>TH</sup> ANNIVERSARY

**Strong Enterprises** was inevitable after Ted Strong made his first jump in 1958. But before he could make his newfound hobby into a successful international business that is celebrating its 50th anniversary in 2011, Ted joined the military. In 1959, he was fortunately assigned to the United States Military Academy at West Point where he coached the USMA Cadet Parachute Team and the West Point Sport Parachute Club. Ted also graduated from Fort Campbell Airborne School and Fort Lee, Parachute Rigger School gaining valuable experience and knowledge along the way.

After the military, Ted opened Strong Enterprises in 1961 in Quincy, Mass. Strong's 50-year legacy of innovation started with modifying existing non-steerable military parachutes into steerable ones. As the fledgling skydiving industry developed, Strong Enterprises expanded to fill the need for sky diving equipment and accessories.

Strong Enterprises expanded their operation's capabilities early on by designing, fabricating and manufacturing complete parachute systems. Some of Strong's early developments are the well-known Para-Cushion series, Lo-Po reserve canopy and Pop Top reserve container designs. In 1977, Strong Enterprises moved to Orlando, Florida to be closer to the year round skydiving and aviation community.

At their larger facilities in Florida, Strong Enterprises again expanded their operations to manufacturing and developing military parachute systems, aerial cargo delivery systems and tandem systems.

Strong Enterprises also developed an innovative tandem parachute system that facilitated Ted's first tandem jump in 1983. The fabrication of this successful system followed and by 1988 Strong Enterprises acquired the patent for the Tandem System.

The 1980s and 90s brought about many new innovative designs including; the SET-10 main Airborne parachute, Master Reserve, the C-1200, C-900 and Dual Hawk Tandem System as well as the Screamer Precision Cargo Delivery System. Also several Manned Airborne Vehicles such as the Quad Pod, the Airborne All-Terrain Vehicle, the Prowler, the Airborne Trailer and were developed and put into action successfully.

The Golden Anniversary of Strong Enterprises in 2011 begins with another innovative design; HOPE Floats (Humanitarian Operation Parachute Equipment), a unique and cost effective design that is a one-time use unguided cargo delivery system for humanitarian efforts. This latest innovative concept adds to Strong Enterprises' many successful projects, developments, government contracts and patents.

50 years of innovation coupled has made Strong Enterprises a world-wide leader in the industry. Strong Enterprises sees many more years of blue skies and limitless horizons in its future.



*Do you know?*

Which are the AADs approved for use on the Dual Hawk Tandem System?

Answer on page 2.

## \$210,000 Judgement Against Tandem Instructor

The Tandem Instructor who had his student/passenger fall out of her harness to her death did plead guilty. This incident occurred in 2006 and was just recently settled. The drop zone just went out of business one day and was soon back in business shortly thereafter.

Tandem Instructors best take heed and understand that you ARE responsible for your actions and the safety of your student/passenger. Perhaps the next judgement will be for a higher amount and include jail time for the tandem instructor. Ultimately, you are all by your lonesome in front of the court.

Tandem jumping is a business, not a venue for the entertainment of the tandem instructor. Tandem Instructors must perform a tandem jump in a professional manner and in accordance with the safe operating practices as dictated by the tandem manufacturer.

With this judgement against a tandem instructor of \$210,000 as a result of a fatality, perhaps we can address the reality of accountability. Tandem jumping is necessary to the continued existence of skydiving out of turbine aircraft, and having parachuting instruction as a career choice. We really do have it good and we need to protect that.



1. Main Lift Web out to stops.
2. Back Diagonals out to stops.
3. Back Strap below Butt.
4. Leg Straps almost to Knee.

### Answer...

(Question on pg.1)

AAD's approved for use on the Dual Hawk Tandem System are:

- CYPRES I & II
- ARGUS AAD (manufactured after August 2007)
- VIGIL 2-Pin

## C-47 Tico Belle, One of WWII's Most Respected Warbirds



For more information and pricing about this incredible event, contact NPTC at (352) 489-4898 or email CONPTC@aol.com

The National Parachute Test Center, (NPTC), brings you one of the few combat veteran planes still flying today, the C-47 Tico Belle. This is your chance to "Jump into History" from one of the greatest airplanes ever built.

Tico Belle flew in the 1944 D-Day invasion of Normandy. The plane which could carry 27

soldiers or five tons of cargo also flew in Operation Market Garden, the Relief of Bastogne and the Berlin Air Lift. Apart from its pivotal roles in World War II, the aircraft was also used in the 1963 war movie The Longest Day.

With the classic sound of its radial engines, the Tico Belle will take flight once

again and this time you can be a part of it thanks to the efforts of NPTC, Inc. The one-week event features an SF-10A course that begins on February 21, 2011 until February 26, 2011. The course includes Primary Airborne Training and Packing Instruction for the SF-10A, the Paratrooper's newest controllable canopy. And, jumps, from the C-47.

## Florida Taxes Impact on DZs

Tandem Skydiving and all skydiving in general is under attack by the State of Florida. Skydive City in Zephyrhills, FL has now been audited for Florida Sales and Use Tax twice in 9 years. The first audit decided that skydiving was not taxable and now the recent audit has decided that ALL skydiving is an 'amusement ride' and that we charge 'admission' and therefore it is taxable. The implications are vast. Missouri, Washington, Texas, Idaho and probably other states are under similar assaults and we are bracing for a long legal battle here in Florida.

Federal Anti-Head Tax laws determined that skydiving and hot air balloon rides (for example) are exempt from taxes by local and state as they are 'air commerce'. The Taxpayer Relief Act of 1997 supports the 'aviation transportation' theory as well. But the US Constitution also allows States to govern and rule themselves so a lot of decisions are still in the hands of the State.

If skydiving is deemed to be an amusement ride, the legal implications are also destructive to the sport. Legal opinions tell us that amusement rides, like roller coasters and amusement parks, have specific

legislation in place in most states that dictate their liability and limits/responsibilities. In other words, skydiving could lose the protection of our skydiving waivers and contracts that protect us from lawsuits.

In any case, Skydive City is pursuing this and we are openly discussing and sharing information with other dropzones and other operations. At the very least, a decision about taxation of any aviation related activity needs to be put in front of the Florida Legislature and given the opportunity to let everyone have their say. It should be a lawmakers decision, not the decision of a single auditor remotely located in a regional office.

We have a good case, but the State wants their money. I think that may be a common thread in today's economy.

**David TK Hayes**

President/GM

TK@skydivecity.com

www.skydivecity.com - (800)-888-JUMP



# 10 Things to Ask Your Potential Tandem or AFF Student

The following is important information I have learned over the years about interviewing potential tandem customers and AFF students who are either elderly, or have some disability or medical condition. I always try to relate the physical aspects of the skydive to that person and what might the consequences be. In particular, the airplane ride, the opening shock and the landing. All of these events have specific physiological effects on people and each person have different risks and will react differently to these effects.

**1. What is your height and weight?** Obvious question. Do not exceed the weight limits of the gear. For tandems, weigh yourself with gear and everything on to know what your exit weight is going to be. Most tandem manufacturers have a 500 lbs (227kg) limit for their gear, so easy math will help you know what YOUR personal maximum tandem student weight is. Do not exceed the TSO for the AFF students rig. If you do and they get hurt, then that is simply defined as 'gross negligence' on your part and the waiver will mean virtually nothing in the case of a lawsuit.

**2. Do you have any metal in your body?** Most people will know a great deal about accidents or surgeries that they have had and can tell you in great detail about it. A spinal fusion with plates/screws or a rod in a femur does not mean that someone cannot jump – but it might raise other questions about the stability of those joints and the consequences of a hard opening or a bad landing. But a rod in the lower spine could break several vertebrae if a hard landing occurs with the student landing on their butt, causing serious and/or more permanent injuries.

**3. Do you have any artificial joints?** The question needs to be asked of everyone. A hip replacement is a dangerous thing for a 70 year-old or 80 year-old candidate. Opening shock alone could dislocate the joint. Knees as well. What is the range of that knee? Can you raise your legs for landing?

**4. Do you have any plumbing (catheters, colostomy bags, etc)?** (Yes that's right – I said COLOSTOMY BAG) While this may be awkward for you to talk about, it probably is not awkward for the student or person that might have one. If someone has one of these or similar devices installed, then it is probably as 'normal' to them as walking or

breathing. But during a skydive, a catheter or bag can come loose or detach, and at the very least, would be a nasty mess to deal with. A lot of catheters are attached to a bag strapped to their leg. Many can be removed, relocated, drained or emptied prior to a jump.

**5. Do you have any other medical apparatus (Pacemaker, insulin pump, etc)?** Again, they could have internal or external devices on their body. A pacemaker is often not a big deal. An external defibrillator might be a problem if it became detached during the skydive. Same for an insulin pump or a catheter used to feed medications into their body? Where is it? Will the harness rub against it? Can it be removed, relocated? What are the consequences of something happening to it?

**6. Are you taking a medication or something that can be administered by me in an emergency?** Some devices or medications should be presented to the instructor, or at least; have the instructor know where they are in case of an emergency and perhaps know how to use them. Things like an asthma inhaler or a diabetic medication. If there is a chance of an asthma attack, then the tandem instructor can take the inhaler with them and administer it if needed.

**7. Do you have issues with heart or breathing?** Someone with a weak or other heart condition or congenital breathing problems may not even be able to breathe properly at 10,000' in an airplane. Combine that with the stress of making a skydive, and you may end up with a medical emergency. Have they flown recently? What precautions do they take if any? And no, I do not recommend bringing their oxygen system on board the plane. Can they deal with an accelerated heart rate for an extended period of time? We all know that heart rates can rise to some 140+ just prior to and during the exit out of the airplane. Not everyone is able to handle that if they have some condition related to heart or blood pressure.

**8. What if my doctor says it's OK for me to jump?** While that may be good information to know, most doctors know little or nothing about skydiving. If you get the chance, talk to their doctor directly and explain the physical things that happen during the skydive. • The airplane ride (hot, sweaty, cramped space and altitude issues). • The adrenaline rush during exit and freefall (heart

rate) • The opening shock of the parachute, (several G's of force and the potential for a very hard opening) • The parachute ride (vertigo, motion sickness, tight and uncomfortable harness, reduced circulation) The landing especially (forward motion instead of vertical, and how we can slide in (or not) and what is expected of the student during that phase and what can happen if it does not go well)

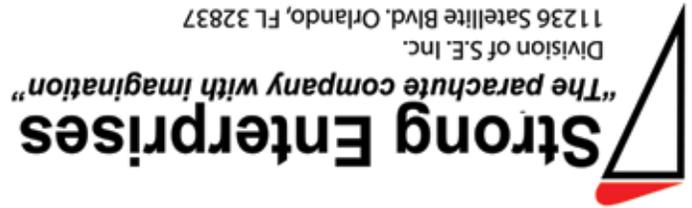
**9. What will an injury do to your quality of life?** I have learned that this is probably one of the most important questions you can ask. An 80 year old with Osteoporosis may be able to skydive, but if they break an ankle, they may never walk again. Bones may not heal and they could spend the rest of their life in a wheelchair or worse. It is much the same for disabled folks. I always try to get a feel for what would happen to their life if they break something, because it CAN and it DOES happen.

**10. Do you have any sort of medical condition that can kill you in a 10-15 minute window?** I ask this question as a catch-all. Basically there is a possible 10-15 minute window in the case of a tandem jump, (a high or early activation on a parachute resulting in a long ride down). During that time, the instructor cannot perform CPR, a tracheotomy, or rescue breathing. So if the student has any medical condition that would need to be attended to by emergency means, the tandem instructor is pretty much helpless to intervene during the skydive. If the student has any such condition, then perhaps a skydive is not a good idea.

When in doubt, consult a doctor who IS a skydiver. There are plenty of them out there and most can advise you on the effects of a disease, surgery or medication on the process of skydiving. Just because the customer is standing in front of you right now and wants to jump right now, is not a reason to take them up. Offer to do some homework on their condition(s) and arrange for a future date to see if they can jump. I have taken up dozens of elderly, disabled, and paraplegic/quadruplegic students in my life. I have also REFUSED to take up dozens of them. Not everyone is capable of making a skydive. Not everyone should be making a skydive.

**David TK Hayes**

USPA D-18764 CSPA D-486 AFF,  
Tandem, IAD, S&TA, Coach, PRO



Division of S.E. Inc.  
11236 Satellite Blvd. Orlando, FL 32837

## Tandem Standardization

**Jump Shack, United Parachute Technologies and Strong Enterprises** have continued the partnership they developed in pressing for a minimum age of 18 years or the age of majority, whichever is higher, for tandem student passengers, within the FAA's jurisdiction.

These tandem system manufacturers have recognized the need for them to pool the knowledge gained over the past 28 years and to establish norms that could be used to make tandem jumping as safe as possible.

*PIA Symposium 2011, in Reno, Nv.* will be the introduction of this program. During a two hour session the concept and the standards will be introduced. In order to fit everything into this time frame we will be allowing some discussion from the attendees, but the comments and questions will have to be brief and to the point.

There will be five speakers using a Power Point display. It should be interesting and fun. Join in and make a contribution to the Tandem Standards.

### Bag Lock on a Dual Hawk Tandem System?

Strong Enterprises did get an incomplete report of a main bag lock with a reference to the cause being related to a mis-routed bridle. We are not sure if it was the Kevlar drogue bridle itself or the drogue deflation line.

The idea behind the design of the drogue system is that the drogue would stay inflated, giving up none of its drag, until the main is completely out of the bag. So, we find ourselves with this little mystery.

Strong is aware of a couple of incidents where the drogue deflation line had not been pulled into the Kevlar because the drogue was never cocked. In one instance the deflation line wrapped itself around the outside of the D-bag. In the other, the deflation line was left inside the

D-bag and became entangled with the main. Each of these incidents resulted in a cutaway.

Perhaps you may have forgotten that the Dual Hawk D-bag has an Anti Line Slump Flap that cradles the line stows during bag snatch and line deployment. This allows us to apply the full force of the drogue to be utilized, resulting in what we feel is a no bag lock environment.

Strong would like to hear from anyone who may have experienced a bag lock on a Dual Hawk Tandem System along with an explanation of its cause, or at least a best guess. We're still willing to learn and to make the gear as safe as possible!