

# PUTTING WINGS ON

## YOUR DREAMS

VOLUME XV

ISSUE 11



Editor Jim Hudson

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### Stick and Rudder Skills

From Pilot Workshop, Pilot's tip of the week. – Tom Turner

"Subscriber question: "When I was a student pilot, I spent a lot of time in the practice area doing steep turns and slow flight with my instructor. Are these good exercises to help maintain stick and rudder skills?" - Sal S.

Tom:

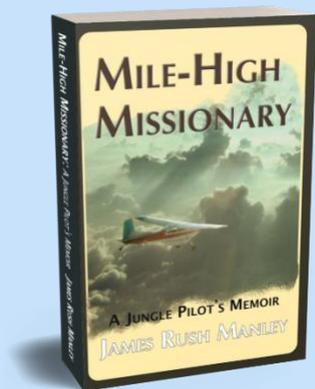
"By stick and rudder skills, we generally mean maintaining good rudder coordination. Why is rudder coordination important? Coordinated flight reduces drag for maximum performance. But the most important reason to keep the slip/skid ball centered is to keep the angle of attack equal on both wings, so that if one wing stalls the other wing stalls at the same time. A stall in uncoordinated flight means one wing will stall while the other wing is generating significant lift. The airplane will snap over and enter a spin. When do you need to work the hardest at rudder coordination? At high angles of attack, and when the airplane is under greater than one G load. Practicing maneuvers involving these conditions are the best rudder coordination exercises. Flight at minimum controllable airspeed, or slow flight, is an excellent exercise for improving rudder coordination. As the airplane slows in level flight the wing's mean maintaining good rudder coordination. Why is rudder coordination important? Coordinated flight reduces drag for maximum performance. But the most important reason to keep the slip/skid ball centered is to keep the angle of attack equal on both wings, so that if one wing stalls the other wing stalls at the same time. A stall in uncoordinated flight means one wing will stall while the other wing is generating significant lift. The airplane will snap over and enter a spin. When do you need to work the hardest at rudder coordination? At high angles of attack, and when the airplane is under greater than one G load. Practicing maneuvers involving these conditions are the best rudder coordination exercises. Flight at minimum controllable airspeed, or slow flight, is an excellent exercise for improving rudder coordination. As the airplane slows in level flight the wing's mean maintaining good rudder coordination. Why is rudder coordination important? Coordinated flight reduces drag for maximum performance. But the most important reason to keep the slip/skid ball centered is to keep

the angle of attack equal on both wings, so that if one wing stalls the other wing stalls at the same time. A stall in uncoordinated flight means one wing will stall while the other wing is generating significant lift. The airplane will snap over and enter a spin. When do you need to work the hardest at rudder coordination? At high angles of attack, and when the airplane is under greater than one G load. Practicing maneuvers involving these conditions are the best rudder coordination exercises. Flight at minimum controllable airspeed, or slow flight, is an excellent exercise for improving rudder coordination. As the airplane slows in level flight the wing's angle of attack increases. The volume of air blowing past the rudder decreases, meaning you need more and more rudder to maintain coordinated flight. With slow flight practice, you'll develop a sense for increasing and decreasing rudder pressure as you sense the wing's angle of attack change. Increased G loading increases the wing's angle of attack, requiring an increase in rudder to keep it coordinated. The most common way to practice flight at greater than one G is to fly steep turns at a constant altitude. A 45-degree steep bank in level flight results in about 1.4 Gs. A 60-degree level bank generates 2 Gs. Maintaining good rudder coordination in steep turns is an excellent practice for instinctively changing rudder input as G-load changes. There are times when you do not want to keep the slip/skid ball centered. Steep slips and crosswind landings come to angle of attack increases. The volume of air blowing past the rudder decreases, meaning you need more and more rudder to maintain coordinated flight. With slow flight practice, you'll develop a sense for increasing and decreasing rudder pressure as you sense the wing's angle of attack change. Increased G loading increases the wing's angle of attack, requiring an increase in rudder to keep it coordinated. The most common way to practice flight at greater than one G is to fly steep turns at a constant altitude. A 45-degree steep bank in level flight results in about 1.4 Gs. A 60-degree level bank generates 2 Gs. Maintaining good rudder coordination in steep turns is an excellent practice for instinctively changing rudder input as G-load changes. There are times when you do not want to keep the slip/skid ball centered. Steep slips and crosswind landings come to mind. But by practicing slow flight and steep turns, you'll develop an ability to maintain coordinated flight in high angles of attack and increased G load conditions." Tom

Another good exercise for developing good rudder/aileron coordination, especially for keeping the plane aligned in a crosswind landing is the Dutch roll. Practice these skills from time to time to keep your skills sharp and not get complacent.

Fly Safe and Don't do anything Stupid.  
Jim

## A new book for your Christmas list



**T-Craft Member – Author Jim Manley**

**Description:**

**The jungle pilot occupies a high visibility seat.**

His role creates the convincing illusion of connection. But the truth is, he or she often leads a solitary life. He drops in from the sky, visits for 15 minutes, then goes. He touches many worlds but rarely becomes part of any.

**The stories in Mile-High Missionary show how one pilot changed from hiding as a sky-creature to reentering the world of real people.**

Sit in the pilot's seat as this missionary memoir flies you into the Amazon Jungle. Encounter the pilot's view. See what he saw. Hear what he heard. Meet who he met. Feel what he felt as he wrestles with his own hopes and joys, doubts and fears.

**Experience bush aviation first hand as this Christian pilot asks the hard questions:**

Is my airplane safe to fly?

Can I find one tiny scratch of an airstrip hidden in an immense jungle?

What if the weather changes?

Can I land and stay on the runway, then takeoff without hitting trees?

After all that, am I really helping my passengers' ministry?

Does my flying benefit the ex-headhunters I work among?

Am I honoring God, or just playing with airplanes?

**Read how he juggled safety and service while doing a dangerous job, then found himself changed by the ones he served.**

**Amazon link:** <https://www.amazon.com/dp/B07KV6V54X>

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Aviation & Space Writer

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## ELECTIONS

Election of club officers and directors will be held at the January membership meeting, 1/29/2019.

The following positions are up for election:

(Incumbent)

- President (Ben Brandt) - 1-year term
- Vice President/Membership 2-year term – a new position
- Treasure (Dennis Wheeler) 2-year term
- Secretary (1 year remaining of Bert Osborn's 2-year term)
- Safety Director (Jim Hudson) 3-year term.

The board passed a motion to create a new position, Vice President/Membership in order to spread out some of the duties of our growing club. In 2013 we reduced the number of board members from 8 to the current 6 in order to cut costs when our membership was down to 60. With our membership nearly double that the workload on some of the positions has increased significantly. The motion to add the VP/Membership position will have to be voted on at the general membership meeting.

Gordon Hall will be conducting the election. If you would like to serve the club in any of the positions, please contact Gordon 208-250-9635, email; glh211@aol.com.

The duties of each position can be found at the following link: <http://www.t-craft.org/duties.pdf>

### December 2018

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

The next board meeting is December 11th.  
No membership meeting in December.

12/11/2018 - Board Meeting  
12/10/2018 – Accounts due  
12/20/2018 - Accounts past due  
12/25/2018 – Merry Christmas,  
NO Membership Meeting

If you have any ideas for safety meeting presentations or would like to arrange a presentation, contact Membership/Safety Director Jim Hudson

**Fuel Reimbursement**  
\$4.70 per gallon.

### Calendar of Events:

### Articles or Pictures

If you have any pictures or articles for the newsletter submit them to Jim Hudson

### Member Statistics:

105 Members  
28 on wait list.  
36 Class I Members (34%)  
69 Class II Members (66%)  
10 Inactive (voluntary suspension)  
15 Suspended (BFR/Med/Attend/Billing, Including the 10 Inactive)  
6 Social Members (non flying, not included in "Members")

(Please report any BFR's, IPC's, Upgrades, or new ratings to Jim Hudson)

13 Student Pilots  
69 Private Pilots  
01 Recreational Pilots  
10 Commercial Pilots  
12 Air Transport Pilots  
33 Instrument Rated Pilots

### BFR's

Robert Shephard  
Mike Bracke  
Brett Sipes  
Russell Graves

### New Ratings

Bill Howard – Instrument  
James Patterson – Instrument  
Jiyun Li - Instrument

## T-CRAFT STATS November Billing Period

### Top three flyers:

James Paterson	54.6 hours
Slay Windham	28.3 hours
Bill Howard	10.5 hours

### The top billing aircraft were:

N13686	\$7,650
N9989E	\$5,606
N4464R	\$2,416

### The top three aircraft flown were:

N13686	102.2 hours
N9989E	43.8 hours
N4464R	33.1 hours

### Fuel Reimbursement

\$4.70 per gallon

REMINDER-We receive a significant discount from the AV Center published prices. PLEASE REMEMBER TO REMOVE YOUR FUEL RECEIPT from the fuel pumps so others will not see our fuel price. Also, please do not broadcast our price to non-members.

**HOURLY RATES (New Rates Effective 8/26/2018)**  
**Due to increased fuel costs our rates have increases as listed. Fuel Reimbursement is \$4.70/gal**



N64375  
\$62.00



N4464R  
\$73.00



N13686  
\$75.00



N1293F  
\$86.00



N1891X  
\$121.00



N9989E  
\$128.00



N7593S  
\$128.00

**SQUAWKS**

64R

- Installed new muffler at 100 hour 12/7.
- Engine replacement still several weeks out.
- New Nav light switch 12/14.
- R&R Directional Gyro 12/14. (installed one removed from 91X when her panel was updated).
- Annual Due 12/31/2018 (hope to do in conjunction with engine replacement)

686 - crack in muffler being watched. Ok as long as not up into cowling. New muffler to be installed at next 100 hour (1774 on tach).

93F - Annual week of 12/17-12/21.

93S - Engine test run complete. Dennis sending balance due (\$14,568.57). Engine was to be shipped 12/7 by ground from Livermore, California

## Cold Weather Operations

If you did not read the article in last month's newsletter, please go to the following link on the club web page. If you did read it, it wouldn't hurt to read it again.

<http://www.t-craft.org/Reference/ColdWXOps.pdf>

As noted in the article, the tape on the bottom over the safety switch on some of the heaters may loosen up and need to be tightened for the heater to operate. If the heater doesn't turn on, check this out.

Ben Brandt has offered to stop by the hanger the night before your flight and put the heat on.

Note: In cold WX the circuit breakers may trip on some of the power posts when the heaters are on. Check the circuit breaker panel, its in the office, on the right as you enter the door.

## **New Hangar Update**

### Hangar Update

- All construction payments, with the exception of the asphalt have been made (also awaiting some final construction items to be completed before final payment of approx... \$3,500)
- Water pipe was routed underground for cold temp operation
- LED lighting was procured through help of Jay Gooden
- Wiring & Permitting should be completed within 2 – 3 weeks, forecasting total cost for lighting & electrical to be less than \$5,000
- Planning to rent four of the bays immediately, will reserve one for a TBD new T-Craft aircraft.
- Hangar Rent based on square footage for city hangars (approximately \$0.20 / sq. ft.) which are not private and don't have electric doors. We added a premium for these
  - Hangar with Water / Sewer / Bathroom - \$316 / month
  - Larger Hangar without water / bathroom - \$280 / month
  - Smaller Hangar without water / bathroom - \$216 / month
- NW hangar will be reserved for the club – large enough to hold meetings in there, potentially. Also has gas so we could install a heater
- This lease space on the airport property is a commercial space, which requires footprint + parking, however this was waived for T-Craft, so we are paying lease fees only on the footprint of the building
  
- Airplane Purchase
  - WE have continued to discuss a new plane, but don't currently have the cash to buy another plane
  - Will need to continue to rebuild savings before a plane is purchased – however other options are being contemplated
  - The hangar will provide income – but until the hangar loan is paid off, it will not generate positive cash flow that would support a new plane

## **Tips and Tricks**

This is a new area in the newsletter. All members are encouraged to submit items you find helpful to the newsletter editor.

### **Cycling a Constant Speed Prop**

The following is a good description of why we cycle the constant speed props in our C182's. As a side note; the only thing our C182 POH say about cycling the prop is; Cycle from High to Low rpm, then back to High rpm (no mention on how many times). Our checklist calls to cycle the prop three times. I believe as the article states, this is important with a cold engine, and that subsequent flights with a warm engine, once is probably sufficient for the same pilot. I think each pilot should follow the checklist for their first flight. It is important to check for any indication of oil leakage out of the prop during pre-flight and run-up while cycling the prop (oil splatter on the windscreen)

From Pilot Workshops – Wally Moran

“The pitch on your constant speed propeller is controlled by the propeller governor which uses engine oil to do the work. When you start your engine for the first flight of that day, the engine oil is cold and viscous. Viscous means it flows like molasses and therefore does not do a good job of controlling the propeller pitch. But since during taxi, the propeller stays in low pitch that's not a big deal. During this time the governor does not need to regulate anything. That's going to be different when we apply takeoff power.

While we taxi, the engine oil is starting to warm up slowly but because the propeller stays in low pitch during this time, the warmer oil does not necessarily circulate to that area.

When we do the runup, cycling the propeller a few times exchanges the colder oil in the propeller with the relatively warmer oil from the crankcase. This is a good thing because when we add full power for takeoff, the propeller governor needs to get busy and control the pitch. We need full RPM but we don't want an overspeed. Both of those things are the job of the governor.

The engine oil usually stays warm for a long time after a flight, so cycling the propeller only once on subsequent flights is enough to confirm that everything is working properly.

Exceptions to this may be required in very cold climates.

There is an aviation myth that three cycles were required to check for, first an RPM drop, second an oil pressure change and last a manifold pressure increase. No such requirement or even recommendation appears in any POH I have ever read. But since the book said to do it three times, I guess somebody invented something to do while this was going on.”

### **Journey to an Instrument Rating**

**James Patterson**

The rest of the story can be read on my blog at: <https://www.daggerfalls.com/blog/journey-to-an-instrument-rating>.

Check the update from last month for a successful check-ride.

## REMINDERS

### HANGER SECURITY

Message from concerned member 12/12/2018:

Jim. Hanger door.

1). Yesterday when I checked out 375...lock was in the latch but not fastened. Lights were on in big bay and 64R still warm.

2) Today... door unlocked with lock on the loop inside. No one around.

Hate to be a critic cause I've done that once but thought you should know.

Please check to make sure you don't have the airplane keys or fuel card in your pocket. Make sure the plane and hanger are locked and secure; hanger door pins in, doors locked, hanger locked.

### WINTER FLYING HOURS

The club policy on winter flying hours is set out below.

5.4.3 "Use it or lose it" hour: In addition to monthly dues, members will be charged one of hour of 152 time at the scheduled rate if they don't fly the equivalent to that time during the month in any of the club planes. The "use it or lose it" hour is intended to encourage members to fly at least monthly to stay somewhat proficient.

5.6 Winter flying hours: During the months of December, January and February the monthly "use it or lose it" minimum flying charges may be combined in any of these three months. For example, if a member did not fly in December or January but flew the equivalent of three hours of 152 time in February, the December, January and February "use it or lose it" dollars would be applied to the February billing period. The same is true if the 3 hours were flown in any of the three winter months. If a member did not fly in any of the three winter months, they will be charged for three hours of "use it or lose it" time in the February billing period.

### MAINTENANCE TIP

When we are pilots in training our CFI's instill in us good habits on how to care for our birds. As time passes, occasionally we all forget and become rusty pilots in relation to care and maintenance of our aircraft. The Maintenance Tip for today is simply, when cleaning the windscreen, use only vertical strokes. Do not use circular strokes. Over time, circular movement of the cleaning towel will leave a corresponding mark in the screen that will require replacement.

## **CARE OF YOUR AIRCRAFT**

### **Take Time After You Flight**

We are continuing to see many instances of lack of care and taking the time to make sure that you're (and our) planes and hanger are put away properly. Gust locks, pitot tube covers not installed, flaps left down, doors not locked, seat belts not put away, master left on = dead battery, avionics master not turned off, lights not turned off (except its advisable to leave the beacon light on as a warning the master was left on), bugs not cleaned thoroughly from all leading edges, windows streaked, dirt and trash not cleaned out (plane and hanger), fuel card or keys missing from the key bag, key bag not zipped or put away, hanger door pins not fully secured, hanger doors left open, hanger lights left on, the hanger itself not locked, lock code not returned to 0000. There should be no need for any such reminders, as a matter of common courtesy we should leave an aircraft in a clean condition after we have flown it. We learned as early as first grade, if we create a mess, we clean it up. That's the grown-up thing to do. PLEASE take you time when ending your flight and be vigilant on taking care of these items.

### **Oil Usage**

Fellow members/owners - in the big scheme of things OIL is relatively inexpensive. However, over time we have established a norm for each aircraft on how much oil a particular engine is comfortable with. Jim Hudson has taken his time to produce a comprehensive check list for each aircraft. Included in the pre-flight section it states minimum/maximum oil to check for. Do not go by what the POH says, i.e. engine has a 12 qt capacity. 93S for example would blow oil out breather tube along belly of aircraft until dip stick reads 8. Please use checklist for amount of oil necessary for all T-Craft aircraft. As I have repletely said, if you are determined to dump more oil into sump than necessary please present yourself at plane wash to clean the bellies. I keep putting 6-7 Qts oil on back shelf and it disappears quickly. Remember to note oil used on log program. Also putting unnecessary amounts of oil into an engine really screws up any attempt to determine what actual oil usage is. An engine has to work harder if sump is over-filled with oil. Read [Aircraft Oil Usage](#) on our web site under Site Index.  
DOM – James Eyre

### **Check Lists**

The club has developed check list for each bird which contain key information on the plane from the POH and some club specific items; oil levels, tire pressures, reminders to log in-out, and clean up items. It's not mandatory that you use a club check list, in fact many members develop their own, which is a good way to get intimate with the details. We've had laminated version in each aircraft, but over time, they grow legs and walk off. Members are encouraged to print out a copy of the club check list for yourself or download the pdf version and have it on your iPad/phone/tablet or build one for yourself. There's a word file as well as pdf version of the club website under the Fleet page. I'm in the process of updating the check-list to include some of the newer avionics, and other items that crop up. If you happen to find any discrepancies or have comments, let me know – Jim Hudson

## **Schedule Master – 90 Day Attendance and Day/Night Currency**

Some of you, in fact most by now have probably received email notices from SM that you're 90 day T-Craft attendance will expire on a certain date. A field was set up in the Status tab to show that expiration date in. This is a way to keep track and notify you of your upcoming 90 day attendance expiration date. You'll get a notice 30 day prior to that date from Schedule Master. You will also get a message after that notice when you log on to Schedule Master. As per club policy, your scheduling and flying privileges will be suspended if you exceed this date, and any future schedules will be canceled if you're suspended. You will NOT be automatically suspended by schedule master if this date is exceeded. You will get notification by the membership director when he suspends your privileges, since there are some circumstances for exceptions.

There are also two fields that you can use to keep track of your 90-day, day and night currency for carrying passengers. You can use those two fields if you wish to enter your expiration date and receive a notice 30 days prior to that date. Students can use the 90-day currency field to keep track of your 90 day endorsement to continue to solo.

## **Billing – Reggie Sellers**

There have been a few mistakes made with the Flight Log System logging so I am writing this in hopes of helping with the billing accuracy.

1. The Flight Log System is NOT connected to Schedule Master in that if you Log a plane out in the Flight Log System and then decide not to fly, you need to log the plane back in. Cancelling the flight in the Schedule Master on-line system WILL NOT cancel the flight in the Flight Log System. You have to do BOTH.
2. When you log a plane in PLEASE hit the GREEN FINISH button. If you hit the cancel button, the flight will not be logged back in making it very difficult and confusing for the next member to take that airplane.
3. If the Hobbs meter is inaccurate when you fly PLEASE call the person that flew before you and work it out. We are all owners of the planes and it is important that the billing is accurate.

Thank you and Happy Flying,  
Reggie Sellers

### **PLEASE REMIT PAYMENT IN FULL BY THE 10TH OF THE MONTH.**

Your account will be PAST DUE if not received by the 20th and there will be a \$10.00 late fee. There will be a finance charge if your account is over 30 days past due and flying privileges will be suspended