

## ON THE BEAM

By Tex Searle

HAULING PASSENGERS AND MAIL HAS BEEN A tradition in our family. My genealogy goes back to an age when some of my ancestors were pirates. They hauled anything that happened to come their way. So one way or another many in the family have chosen various modes of transportation from sea-going vessels, the Overland Stage, pony express, and passenger mail trains, to the airlines to make their livelihood. Wherever it came from, my desire to fly an airplane was bigger than I was.

Unfortunately, I did not fly while serving in the military in WWII, and all I had to offer in multi-engine experience was training time in a surplus UC-78 twin engine cessna, known as the bamboo bomber, and a Twin Beach C-45; hardly competition for the surplus of pilots available after the war. But perseverance paid off. I wanted to fly out west in the Rocky Mountain region, so I camped on the door step of Frontier Airlines until Chief Pilot Scott Keller finally relented and let me in the door.

How well I remember my initial training. After passing an acceptance test and completing ground school in Denver, I was sent to Salt Lake City to complete my Link and flight training in the DC-3. The Link trainer was a ground training device that simulated flight conditions; it was the same trainer in which many WWII pilots received their instrument training. It had stubby wings mounted on each side of a cockpit to make it look more like an airplane, and a box-type hood that swung down and covered the cockpit to simulate instrument conditions. The cockpit rested on a mixed contrivance of mechanisms and bellows that gave it motion.

Captain Jack Kettler was the Link instructor then. When he asked what type of radio orientation I would prefer to use and I requested the low frequency range approach, he seemed somewhat surprised and commented, "I thought that went the way of the old wood and fabric airliners; but if you can find your way to the runway using that old method of navigation, you won't have any trouble with the newer VOR." (visual omni range)

With the hood down and the instrumentation lights turned up, I was fired up to go. Suddenly the hood went up and a perplexed voice said, "Here, you forgot these." As he handed over my earphones I must have looked a little bewildered, and with some assurance Kettler commented, "Hang in there, you aren't even off the ground yet."

After practicing climbs, descents, and steep turns, I began to feel a little more confident in the ulcer box. Kettler asked if I had my earphones on and the low frequency radio tuned to the Salt Lake Range Station. I assured him everything was on and tuned. "All right," he said, "locate your present position, and then shoot the approach into the Salt Lake Airport." I struggled through the ninety-degree method of orientation and located the approach beam of the north range leg. After bracketing the steady hum of the beam, I continued inbound on the published heading of 149 degrees to track the steady tone of the on-course oral signal. Turning the volume control down, I listened for the build in volume of the steady tone that would verify I was inbound to the range station. If the aircraft drifts a little right of course, the steady aural tone (bi-signal zone) will commence to fade and the Morse code letter 'A' expressed by an oral tone of 'dit-da' will become more audible. If the aircraft drifts left of course, the letter 'N' expressed as 'da-dit' will become more audible, and the steady on-course zone will fade until it is inaudible unless a corrective course change is initiated to capture the steady tone.

I remembered the old saying, let the humming of the angels lead you to that safe haven: After a cross-country flight navigating by their ears, the early-day aviator staggered around on the ground waiting for the humming of the angels in his ears to subside.

Using my ears to navigate, I managed to hold the steady tone until I was over the cone of silence, which is the indication you are over the low-frequency-radiorange tower. From there I flew the published heading to the runway and marked the time estimate it would take to reach the runway. Descending to the minimum approach altitude (altitude above the surface), and at the estimated time to break out and see the runway, the hood remained down. (This indicated I was still in clouds.) Not seeing the runway, I commenced to execute the missed approach. The hood on the little Link trainer suddenly raised up and Captain Kettler growled, "I left the hood down to simulate you were still in the clouds. You didn't ask for weather information to determine the height of the cloud base. If you had, you would have known the bases of the clouds were below minimums and you wouldn't break out and have visual contact with the runway." After a lengthy period of onesided verbal gestures and several more sessions in the ulcer box, I was cleared for flight training in the DC-3.

Chief Pilot Scott Keller is a patient instructor. I had studied hard and felt I had memorized the systems and every part and size of the DC-3. On the walk around the first question he asked, "What is the tire pressure in the mains?" I stood there like a frozen rope, "The tire pressure in the mains?" "Yes," the chief replied, "the tire pressure in the mains?" My confidence took a down turn, I couldn't even answer the first question. I suppose chief Keller could see the perspiration running down my neck and not wanting to fly around with a clammy student in the cockpit asked, "What is the military designation for the DC-3?" I hurriedly answered, "C-47." The chief smiled and asked again, "What is the tire pressure?" It dawned he was giving a strong reference, and I blurted out, "Forty seven." He said, "You got it and don't forget it." And I never did.

Taxiing the DC-3 for the first time was about as easy as convincing a nervous jack rabbit to walk a straight line. That lady had the touchiest brakes in the whole world: you just think about applying them and they grab you. After getting it down to a fishtail ride down the taxiway, Keller commented, "If we had passengers aboard, they would all be stacked in the aisle, but don't sweat it, it's a well known axiom that the Grand 'Ole Lady is a bit contrary on the ground." He instructed me in how to fan the rudder and smooth up the ride. On the takeoff roll, as the tail rises the nose lowers. It was frustrating to see the runway rising up, but I bluffed it out and pretended not to notice this odd sensation of sinking into the runway. After a hard session of climbs, descents, sixty degree banked turns and stalls, Keller said, "We'll shoot several landings to get you up to speed and more accustomed to the landing temperament of the DC-3. In the air she's docile, on the ground it takes a pilot to master her."

On my first approach the old control tower, then situated on the east side, cleared us to land north on the north-south runway. The landing was so unpleasant— more like a controlled crash. It didn't do a lot for my morale when the control tower began offering Captain Keller odds the Grand 'Ole Lady wouldn't survive another encounter with the earth, and even worse when he didn't take them up on it. Then they suggested it would be better for all concerned if they cleared us to make our landing approach to the south. In making our approach over the less populated boundaries there wouldn't be so many spectators. Keller happily agreed.

After becoming oriented to looking through a windshield almost seventeen feet above the asphalt, and a lot of body english from the chief, I was able to convince the old girl not to swap ends and to safely stay in the confines of the runway without crashing and burning; much to my relief and that of Captain Keller. But again I had an odd sensation after touchdown as the tail commenced to sink to the runway, the nose of the DC-3 began to rise as though we were lifting off again. Not wanting the chief pilot to know I was sitting across the pedestal from him and feeling sensationalized, I put on my game face and hung in there. Having been given these numbers in ground school, the significance of it never dawned on me until experiencing it in the DC-3. When the tail rises for take off, the nose lowers two feet, and after landing, as the tail lowers to the runway, the cockpit rises two feet.

With the hood obscuring my outside view there were several more grinding sessions of shooting the different instrument approaches with various equipment failures to simulate emergencies that could befall an unsuspecting pilot. From the grinding training the chief was laying on me, I thought maybe he didn't like me. But when I got into the real world of flying the mountain empire I understood why. The chief assured himself his crews exceeded the CAAs (Civil Aeronautics Administration) and Frontier's safety requirements for the isolated airports they would be flying into in the mountain empire. He insisted they keep a high priority in practicing simulated approaches using the dated manual-loop orientation to establish a time-distance to the radio fix and then to track an inbound course to the runway with a partial panel. (Minimum flight instruments.) After completing the flight training checks I was given an oral exam on the DC-3 as well as the route structure. Notified I had successfully completed the copilot requirement checks was another step towards that final goal I'd dreamed of as a youth.

I mentioned to Captain Dave Cannon that I finally figured out why the chief had laid it on me in training: "It was because he wanted to keep me around." The captain answered. "It wasn't you he was concerned about, it was the DC-3s he's concerned about."

## **ALL IN A DAYS WORK**

By Captain Billy Walker

I was flying a CV-580 from Denver to West Yellowstone through Jackson Hole then back to Denver on 6 June 1979. We had a full load of passengers and two mechanics on board, one of which was on the jump seat while the other occupied a seat in the cabin. The mechanics were going to Jackson to fix another CV-580 that had a mechanical problem.

Other than heavy clouds with some airframe icing, the flight was pretty much uneventful from Denver to West Yellowstone. However, descending into West Yellowstone, the compressor light flickered on and off I asked the mechanic if he would mind servicing the compressor when we arrived in Jackson. No problem.

It was the copilots leg, WYS-JAC, with everything normal up to our level-off at flight-level 180 (18,000 feet). Then the compressor light illuminated steady and the decision was made to disconnect the compressor per Frontier's procedures. We had to descend to the minimum en route altitude of 11,300 feet so the passengers would have a comfortable supply of oxygen. On the descent and at the minimum en route altitude, we encountered quite a bit of rime ice (keep in mind this is on June 6th). Naturally, I selected the de/anti-icing. However, the left side wing anti-ice would not activate. The essential bus was behind the captains head where certain circuit breakers could be re-set to activate stubborn systems. We did this, albeit, to no avail.

Soon we were turning the corner to intercept the Jackson Instrument Landing System when the fire warning bell activated with no fire warning lights. I had the mechanic reach over and silence the bell, then turn it back on only to have the bell still ringing without fire warning lights. I had the copilot check to see if the starter arm switch was accidentally bumped on. It wasn't. Then I had the mechanic re-set the fire bell switch and, with the bell ringing, I pressed the fire test and the number

two engine wheel well light illuminated and stayed on. After a re-test, the light still remained on. Now we were unpressurized, with a fair buildup of ice on our left wing and (presumably) our tail, along with indications telling us we had an engine fire. Of course we elected to follow the procedures and went through the engine fire check list. Since the wheel well was presumably on fire and remembering a previous incident with the CV-340 years before, I elected to put the gear down early in hopes the tires were not on fire too.

I called Jackson to check the weather while the copilot, Jeff Benger, did a beautiful job flying the ILS in solid IFR. With our unusual icing dilemma Jackson gave me the bad news that the airport was below minimums with slush on the runway and a crosswind from the left at fifteen knots gusting to twenty.

I called the flight attendant up front and asked her to relay a message to the mechanic in back to inspect the number #2 engine and for him to pay especially close attention to the tail pipe and the wheels as those were viewable from his position in the cabin.

The fire light didn't go out after firing the first bottle, and the bottle supply light would not illuminate even though it tested properly. So, I fired the second bottle. No luck! The supply light would not illuminate other than the push-to-test and the fire light stayed illuminated along with the bell. (if the switch was left on)

I assumed control of the aircraft as I needed to get on the nose steering upon landing while the copilot maintained aileron control deflection and forward yoke. With the number two engine shut down, a left hand cross wind, along with deteriorating runway conditions we had our work cut out. Jeff then continued reading the check lists. Every once-in-a-while I would look back at the mechanic thinking it must be Elmer Burson, deceased simulator instructor famous for his malfunctions in the simulator, back there causing all this. (Grin)

But, alas it was the mechanic who had been on the jump seat from Denver. He had little beady eyes when we left Denver and now they were about the size of a saucer! He made every effort to be helpful, it is just that the airplane was uncooperative. The second mechanic riding in the cabin came forward to report the mist from freezing rain and clouds was too dense to see much, but he could just make out the tires and they looked normal.

As the copilot checked the items off he started to relay to me the missed-approach procedures. I said there will be no go around. The condition of the aircraft coupled with the weather and terrain considerations would not allow this and I'm determined to take the safest approach and that is, get us on the runway safely even if conditions are zero-zero.

We radioed to have the emergency crew posted at the approach end of the runway and for them to attempt to make out if there was any evidence of fire. If there was evidence of such upon landing, we would immediately evacuate the aircraft on the runway. Our flight attendant, Sally Douglas, stepped into the cockpit to report she had the cabin prepared for an emergency evacuation and would wait for any announcement from our part after touchdown on the runway. Like all of our flight attendants she is a real professional and did a fantastic job considering where we were and the number of people we had on board (54 including crew and the additional crew member).

We broke out around 150 feet. Slush makes for a nice touchdown, but really squirrely on the runway with the direct crosswind. With a thumbs up from the ground crew, I elected to taxi to the ramp. For only a 26 minute scheduled leg we had been busy. The amazing part is having a mechanic on the jump seat observing all this. Interestingly, there was actually little wrong with the airplane. The fire bottles did fire, a fact we could have discerned from our flight attendant as they scared the pants off her. She said it sounded like a cannon. The bottles are in the belly under her seat! Later we found that the switch where the bottles were located was defective and would not pop up turning on the supply light.

The fire sensor loop was at fault and that caused the fire warning to ring. The compressor did need service and the anti-ice valves needed tweaking up some too.

I would shut down the engine again if facing the same situation as there is no way we could acknowledge for sure if we had a fire with the compounded situation we were facing, I guess that's what procedures are for.

The mechanic that was on the jump seat said he would remain on the ground from then on and fix airplanes with both his feet planted on solid earth. I still wonder if his saucer-sized eyes ever returned to normal. As for me, I still wonder if that old simulator instructor Elmer Burson had something to do with all that.

I would of given anything in this world to have finished my career with good ol' Frontier. When I allow myself to look back, it is through tear filled eyes. They say we should never look back, but how can you not think about the close relationship we had on Frontier. It was there, and I'm glad I got to be apart of it. Those were the golden years of flying for me.

## **ADDENDUM**

By Captain Tex Searle

Today, Captain Walker manages the A320 Fleet Training for America West Airlines. Additionally he is a check pilot and a Federal Aviation Administration examiner. For recreation he is finishing a 7/8 scale replica WWI Nieuport 17 fighter, and will fly with several others in the Lafayette Escadrille de Arizona 17 Squadron.

Captain Walker's mother, Frances Emily Walker, was the first woman to learn to fly in Wyoming in the 1930s. Knowing his father, Pic Walker, was an Elder Statesman of Aviation, and being somewhat familiar with Pic's history, I would like to relate some of his background.

In 1924 Pic flew the long-winged OX-5 powered Alexander Eaglerock. He did some barnstorming and later operated three CPT (Civilian Pilot Training) flight schools for the U.S. army. He was posthumously inducted into the Wyoming Aviation Hall of Fame as the first to be selected. He was named Elder Statesman of Aviation by the National Aeronautic Association. His life went from that of a six-year-old-kid riding on a stage coach from Meeker, to Rifle, Colorado, to that of seeing men walk on the moon.

At the time of the CPT program, Dave Cannon (who later flew as a Frontier line captain) was the Army Air Corps liaison officer and became good friends with Pic and his wife. Captain Cannon, as a matter of fact, used to change the diapers of young Billy. Fact is stranger than fiction, in later years young Billy became a first officer on Frontier and flew many copilot trips with Captain Dave Cannon. Billy acknowledges that Captain Cannon liked to embarrass him when the young stewardess's were around with that bit of trivia about changing his diapers.

*-Excerpted from THE GOLDEN YEARS OF FLYING by Captain Tex Searle with his permission. It's a wonderful book about some great years in American aviation with insights and stories about the original Frontier Airlines, the best little airline ever.*