



Connie flight from Paris to Cairo 1951

- *From time to time, we revisit an original Air Facts article that we think would make enjoyable and worthwhile reading today. So it is with Bob Buck's "Flight to Cairo," the legendary airline pilot's story of flying a TWA Constellation from Paris to Cairo in the days before jet engines and GPS. This is a detailed description of a flight, and like us, you will no doubt marvel at how much has changed. This originally appeared in the February 1951 edition of Air Facts magazine. –Ed. (Air Facts staff August 23, 2013 10:08 am <http://airfactsjournal.com/>)*

The weather map in the Paris office looked like a typical late fall European map, one front close behind the other. On the Continent weather moves fast—a front passes and before you've settled to the respite the next one has come along.

That's the way this was; a cold front had passed Zurich, Switzerland, our first stop; here in Paris it was overcast and a light cold rain fell in the early evening; it was the beginning of a new front moving toward Paris from the west. The three hundred and forty mile flight from Paris to Zurich was between the fronts.

This article originally appeared in the February 1951 edition of Air Facts.

Actually neither front was going to bother us much. A departure in the rain and an arrival at Zurich where there would be a broken stratocumulus deck left over from the cold front.

We taxied the Connie into the wet night. On VHF, in English, the Paris tower had cleared us to the runway. All the world of the air speaks English as it is the official language and so no matter where you go you call the tower in English. Sometimes it's pretty shaky English you get back, but you get it. In Paris they speak well with enough French accent to make it attractive.

We ran up the engines and called the tower for ATC clearance. He gave us, "TWA 926 cleared to Peter Easy marker, contact Paris Control immediately after take off on 112.1." Peter Easy is a homing beacon forty-eight miles out on the east leg of Orly Field range; it's on 328 kilocycles.

Orly Field is the one used by us and the intercontinental traffic and is southeast of town. Le Bourget is used for intra-continental traffic and is northeast of town.

In the air the rain changed to snow and the temperature went down with altitude. We called Paris Control and he cleared us to Zurich at 7500 feet to report over Peter Easy Marker. The propeller alcohol was on and an exploratory look at the lighted leading edge showed no ice. After giving our time off to Paris Control we gave our company radio the time off also on another frequency. This “company” station is maintained by more than one airline and handles the traffic which goes to the company dispatch offices and is also relayed to the various ATC control agencies; actually most of the traffic control is handled directly with the control itself on VHF as we did with Paris Control.

We crossed the PE marker, told Paris Control and headed out toward Zurich. We left the Paris range and that’s the end of range stations for some distance. We use homing beacons to find Zurich.

The snow stopped and we were between layers; the radio reception was very good and that’s more of a bother than a help. In Europe there are many radio stations and their frequencies are too close together and it makes it tough to tune what you want. Tuning various beacons along the way didn’t find anything that the ADF needle would take a good bearing on. The noise was a mass of squawks, tones of keyed signals and music, a useless jumble. The thing you do is use the flight plan heading and keep toward Zurich. Having a radar type altimeter allows a constant “look” at your elevation above the ground and an idea if the terrain is raising or lowering. The navigator keeps track of it.

Getting close to Zurich we were on top of that post frontal stratocumulus deck and occasionally the ground could be seen through breaks, a light now and then. The lights are few because Europe doesn’t light up like the United States and even a city like Rome doesn’t look any bigger than Amarillo, Texas at night. So the few lights you see aren’t much help.

I tried to tune the Zurich beacon on 265 kilocycles, but instead of getting it kept getting a station in Northern Ireland. The many other beacons around Zurich did not come in any better. In that case you hold the heading and wait. We flew closer with only ten minutes left to our ETA. The Zurich beacon attracted the needle of the ADF, but in an erratic manner with the needle pointing off to our right about thirty degrees and holding steady, and just when you begin to think about believing it, the needle jiggled to a point ahead and then to the left. You watch these erratic movements and gradually get a pattern, an average. I felt we were to the left, or north of Zurich.

In the meantime the radio operator had gotten me a clearance into the Zurich area. He did this on CW (With a telegraph key and dots and dashes on a Continuous Wave transmission.—*Ed.*). The Swiss still want to use code into and through their areas and so it’s done that way until you get local clearance at the field, through the tower, on VHF.



The legendary Constellation, a mainstay of TWA.

And then being a little uncertain I used a very nice thing that you find in Europe, their DF (Direction Finding) facilities. To go back a little it's worth pointing out that the European idea of radio navigation and ours has been different. In ours you carry a radio on which you tune a ground station and then either ride a beam or take a bearing. In Europe you call the ground and say, "Where am I?" Mostly this was done by code on frequencies near 300 kilocycles, but now they also have VHF voice and a large share of them understand English. We will have a thing like it in the United States before long.

So in this case I selected the frequency of 118.1 and gave Zurich a call. "Give me a QDM." Which is the same as saying, "What is my no-wind magnetic course to you?" The efficient Swiss never keep you waiting long. "TWA 926 QDM one seven zero." That means if there wasn't any wind and I flew 170° I'd get to Zurich, it also meant I was north northwest of the field which fitted in with the tendency of the ADF needle. I turned and flew the 170° and added a few degrees for the west wind. In a few minutes I asked for another QDM and it was still 170° . By now the ADF needle had settled down and pointed ahead at the HEZ beacon which is the first beacon for approach and is located fifteen miles north of the field. It is one of four beacons. Zurich is loaded with radio aids once you get near the field. There are four beacons in a row which you progressively pass from northwest to southeast as you approach the field. At each beacon you descend to a lower altitude. These beacons are tuned in on our ADF's and give us constant bearings. Along with the beacons there is an ILS on the runway you are headed for and on top of all that you can get continual QDM's by voice as fast as every twenty seconds if you want them. All this leads to the runway which is almost 9000 feet of smooth cement and lighted like Broadway. It's a wonderful approach. The Swiss believe if you are going to do it, do it first class.

For us there were scattered clouds at Zurich and we landed without fuss or bother. The stop is for about forty minutes. You have it systematized at these stops: I get off and go through a quick customs; because I'm not leaving the field this amounts to an exchange of greetings between me and the customs man, then I go into the weather office where the Swiss meteorologist briefs me on what's ahead and I tell him what's behind. The meteorologist is efficient and very neat in a white coat about like your garage foreman wears. His office is in one of the many small wooden buildings of the field. They remind you of carved things, music boxes, mountainside chalets and the Alps. From the weather man I dash over to the bank and cash a check to get a few Egyptian pounds for use in Cairo. I do it here because the rate is best, on the way back I'll get some French francs. From the bank I go to our office,

sign the clearance and look over the Notams. I've done all this quick and so there's fifteen minutes left. The rest of the crew joins me and we go into the little building which has a refreshment stand. They serve coffee, about the most American in Europe, and they sell pastries and chocolates that are delicious and fattening too. We buy some candy bars to take along and after finishing the coffee go back to the airplane.

Now we have an almost silly flight; one hundred and forty-four miles to Milan, Italy, but it's a highly interesting one hundred and forty-four miles because we go over the Alps.

For the weather set-up that front which passed Zurich now becomes interesting to me because it has shoved up against the big hills and when a front and mountains collide something happens. In this case, however, the front had been weakening, the discontinuity wasn't there and I know from past experience it will only mean a lot of status type clouds over the big hills.

"The Alps are not bad to fly over... It's a simple problem in one word, altitude!"

The Alps are not bad to fly over, as they might seem. It's a simple problem in one word, altitude! You get a lot of it before you go over and then make certain you hold it until you have a positive check that says you have passed the mountains. In this manner it's safe and simple. The minute, however, you take something for granted you may try to push an Alp over and they don't push!

So off from Zurich which is 1400 feet above sea level bound for Milan which is 800 feet above sea level, but with some things 15,000 feet high in between. Our cruising altitude is 19,000 feet, thanks to pressurization and the Connie. We get most of the altitude right over Zurich since it's a short way from Zurich to those Alps.

We lazily circle in a climb between two of Zurich's radio beacons. At twelve thousand feet there is a stratus deck and we enter it. There is a little rime ice, not much. At sixteen thousand it is safe to head south toward Milan and we proceed on course, but still climbing. At eighteen thousand the stuff is shred-like and I glimpse through breaks. At nineteen thousand we break clear and are just on top racing past the moonlit clouds tops at what seems tremendous speed because of their closeness. It's that old fluffy moonlit world below and the big clear starry sky above.

There isn't much to check enroute. The navigator watches our positive altitude and he "sees" the ground climb toward us and he can tell when we are over the highest mountains. But Rome radio is trying to get us, the company dispatcher has a message. He is worried about Milan. It has only a one point spread between temperature and dew point and he's afraid it might go down, or even if it did stay up for our landing, he is afraid it might go zero after I land and then we would not be able to get out. And he's worried about Rome, our alternate, there might be fog there, so change our alternate to Nice. I like that, I wouldn't mind going there, for about a week.

Rome doesn't worry me because it's really rare that Rome gets fog and if it did I have enough gasoline to reach Tunis and I know that's a good deal. As for Milan, well I don't think it will fold. It does look it. I can visualize the field way out from town in the Po valley. It is isolated, the late night air is cold and goes through your clothes and into your bones. Because it is a valley, cold air is draining into it and you can almost feel the fog. But the thing that makes me

confident is an overcast; some of the stuff from the Alps is hanging out over Italy and it gives a cover that should prevent much cooling and give us enough time to get in and out.



The cockpit of the Connie is full, and everyone has a job.

The navigator informs me we've passed the highest mountain, the radar altimeter told him so, but we hold our altitude for more checks before descending. On VHF we get Milan Control and are cleared down. It's not like the states over there, it's seldom, at an odd hour like this that there is any other traffic and you almost always are cleared down quickly. We descend to sixteen thousand feet, which is still a safe altitude to fly between Zurich and Milan, and hold it to the Milan range station. The range doesn't come in at all until you've passed the Alps, and then it comes in shaky, but near the field it's okay. We keep that sixteen thousand and now are on instruments in light snow or ice crystals. In a few minutes we pass over the Milan range and we are, for sure, over that wide valley. We start down making the descent on the south leg of Milan away from those big hills. At eleven thousand feet we break out underneath and see the lights of the little villages in the valley, there seem to be hundreds of villages, little groups of dim yellow lights.

It is hazy, almost foggy. Out by the airport it is very black; they do not turn on the runway lights until you are close and so you seem to be circling over nothing and it seems pointless; the cockpit is dark with only the red glow from the instruments, the wind presses around the outside of the plane, but the only indication of speed is that indicator which says 250! It is raining inside the airplane, not because of any rain outside, this rain which is annoying me and the co-pilot is the condensation that all pressurized airplanes collect. It was frost on the inside of metal window sills and braces up high, but now, descending with the temperature rising, this melts and it melts all over you. As one pilot put it, "That Connie loves to fly, it loves to fly so much it cries everytime you come down!"

At three thousand feet on the south leg the procedure turn is started, the tower contacted for final and the cockpit items checked over the last time. Headed toward the field we descend, but only to the instrument approach minimums because even though we are contact it's so dark we might as well be on instruments. Down to fourteen hundred feet at the range station, which is the final altitude, and at the range station those runway lights show up, two rows along the side of the runway, they are the only lights clearly visible.

It looks weird to see two rows of lights just sitting there in dark space, you turn a little and these lights sweep up to one side, you nose down and they climb into the sky, it's a strange and poor visual reference. You fly mostly instruments and since there is an ILS, check the glide path and stay above it, and use the altimeter too for obstruction clearance. Very close to the field the runway itself, the pavement, becomes dimly visible and now we can let down and land. It is very hazy down low and we glide swiftly through thin stuff, fifty feet off the ground, that looks like the exhaust from a big bus hanging there. It's fog trying to form. The flight from Zurich took one hour and thirty-seven minutes for the one hundred and forty-four miles, but the time was spent going up and down.

Although I still think the overcast will keep the place open I tell our Italian agent to hurry it up and get us out quickly.

While they load and unload baggage, add gasoline and all the busy things of a stop I go to weather and clearance. It is an automobile ride. With the co-pilot and an Italian employee we struggle into a little Fiat station wagon and go almost a mile to what was once an Italian air force base. It is very attractive in its old way but suggests something that once was, but now is finished.

The buildings are stone and mortar and very Italian, lovely bushes and tall trees surround the area, behind the main building is a pleasant garden, drab now, but once, in summer, there were arches of vines, formal cropped bushes, all in foliage, tables that sat out on the patio, lighted lanterns, the murmur of voices, soft romantic music, a tinkle of crystal that held good red wine, Italian officers resplendent in their uniforms, black boots shining, the quiet voices of visiting ladies. You glimpse a vision of all this that had been as you pause before the building, but it is gone now.

Inside, the building is very worn and dark and cold. It has been beat up by the war. The little room of the weather office has two dim light bulbs that hang on long cords from the high dark ceiling, the faded blue plaster walls are marked and chipped, the desks, the benches are all used very much. The weather man speaks in Italian about the weather to Rome and my TWA man translates, but I stop him since I want to see if I can understand. I can because it is very simple, clear weather. "Fog in Rome?" I ask him. "No, no," he says emphatically. And I am happy to see he feels as I do and not all worried like the dispatcher.

From the weather office I go to the clearance room. You file an Italian clearance much like our ATC form. This room is drab too, only one dim light, a table, a desk, two sleepy men dressed in uniforms that once were fancy and important looking, but now are tarnished and beat up like the walls of the building, it is sad. After pleasant greetings we depart and drive back through the chill dark night.

Near the airplane is an administration building under construction and partly finished and serviceable. The ticket counters are new and finished in natural wood and of modern Italian design. They are attractive and show the sense of beauty and fine craftsmanship these people have. You feel, looking at this, that they are coming back.

A refreshment stand is finished in the same pleasant style. You can get pastry, coffee, a drink. I ask for cafe espresso. This is a small cup of very potent black stuff. Its making is a real production and much machinery is involved. There, on the counter, is a big steam tank with valves to turn, gauges to watch. A small container of powdered looking coffee is put in it, a

tiny cup placed under the big chromium machine, the operator turns valves, steam hisses and slowly, drop by drop, the black fluid falls into the tiny cup. I think the steam, under pressure, passes through the coffee and condenses. With an air of accomplishment and artistic flare of arm, the cup is placed before you. You half fill it with sugar and sip slowly, it will keep you awake to Rome easily.

The flight to Rome is simple and short, only three hundred and thirty miles, the highest hill a little over seven thousand feet. These mountains are the Appenines and sometimes they cause a lot of weather. In summer there always seems to be big cumulus and thunderstorms hanging over them during the hot days, but tonight they are clear.

The first good check is Pisa, one hundred and fifty miles from Milan. It has a range station and pretty good homing beacon. All these aids I speak of probably sound better than they are. Because of that too close frequency business these aids are difficult to turn and do not give the indication you like until you are close, but with the expedient of holding a heading until something is audible, of keeping plenty of safe altitude until you are sure, of lots of gasoline in the tanks, and of a lot of little tricks you've learned through the years, it comes out all right. It is more interesting than flying in the states because it is the kind of problem which requires the craftiness you had in barnstorming days, you just don't simply tune the radio from one aid to the next.

At Rome we have approach control and all the systems of home. There's a difference, however, in that they are new here, the nationals running them haven't completely gotten the ideas. They have the language trouble too and it is difficult for them to grasp the problem and think in another language. I imagine all the manuals they have been supplied probably confuse the issue too because manuals are confusing anyway. So while we work the procedures and respect their wishes, we also monitor the air and check other aircraft and keep our own traffic problem in line. Time and experience will get it worked out.

Rome has one main runway of 6800 feet, a range station and an ILS that does not work very often, but Rome weather is good, very much like Southern California without the smog. The airport was knocked about during the war, but they've been putting it back together and now there is a very modern and attractive administration building almost finished. There's a good restaurant and the crew settled down to a four A.M. spaghetti dinner.

Now the up and down part of the flight is over and we have one more hop, but one longer than the entire distance we have flown so far. It is to Cairo which is 1328 miles across the Mediterranean.

The map studied at Rome showed typical Fall weather enroute to Cairo; there always is, at this time of year, a front between the two places, and being this far south it means thunderstorms. This front is between the toe of Italy and the island of Crete.

The weather people in Europe are much the same as ours at home, good on their own ground, around their own terminal, but more vague the further they get from it. Also, overseas, they do not have the spot hourly reports as we have and so have less to work with and it is more difficult for them. All in all they do pretty well.

From Rome we head southwest toward the toe of Italy. Near Naples, over Capri, the sky begins to get light. By the time we cross the toe it is day. The mountainous country is brown

and barren and looks like poor growing land. After crossing the toe we steer more east and lay a direct course toward a point a few miles east of Alexandria, Egypt. The sky is blue and it's a lovely day, but far ahead I can see cumulus. From a distance they seem low, but you know it's that front and when you get up to them they will not be low. We are flying at 17,000 feet.

From the distance it is a line of small cumulus, closer it is a line of big cumulus and even closer they are cumulo nimbus. There isn't much to get excited about until you get even closer. I study the clouds and try to pick a hole through the line or a place to go around. We are still in clear air and far below the sea is rich blue. We get very close and the clouds tower thousands and thousands of feet above us. There is a place to the south that looks better and I turn that way. I am almost certain it is a wasted turn because sooner or later we will come to a place that does not have any holes or easy places and you will have to go through.

And that is correct because as I round that easy looking corner a big white wall faces me. This is the place. The seat belts go on, we slow to 180 indicated, pitot heat, carburetor heat, propeller alcohol and the time is here: the spot looks as soft as any, there is a good chance it will not be bad because at this hour the storm should be weak; and you think about this as the cloud comes slowly closer, then it comes quicker and in a rush we go on instruments and it begins to snow. There is choppiness and the static is very loud. The static builds to a roar in the ear phones as the snow increases, and then the static quiets down to a buzz and we relax a little, but then it builds up again and the air gets rougher, we go up quickly, but rather than fight it and increase air speed I let the altitude go up knowing we will run out of that up draft before long and we do, and then the howl of the static quiets to a hum, but the air remains choppy, and then the static becomes very quiet, as a whisper, and the snow is light.

We slide out of the side of the huge clouds like walking out on an old fashioned porch with a big roof, because a wide layer of cloud hangs over us and from it light snow falls, the sun ahead makes the snowflakes sparkle like a million sequins being thrown at us; directly below, way, way down, the sea is that rich blue. In a few minutes we are away from the clouds and the front and now it is only the sky and the sea. The navigator gives us a new heading and we settle down.

Until now the navigator wasn't used much, he acted more as a secondary aid, a nice thing if you get into a position where you might need a celestial fix, so through Europe he more or less follows you, but now, across the water he takes drift sights, works pressures, takes a sun line and does it much as we do across the Atlantic.

The cute French hostess brings me breakfast and there is not much to do except stay awake. It is sleepy too because the bright sun beats down on the airplane and the world is warm and lazy.

The coast of Africa first shows as a brown haze on the horizon. It comes in from our right and finally, when you can see it plainly, it is just desert, desert that comes from far south in the Sudan to the sea, that goes east and west for thousands of miles, "A hell of a big beach!" one GI called it.

As we cross the coast the fabled city of Alexandria is to the left, ahead is the fertile area, created by man and Nile; an abrupt sharp line of change from the tan sand to the fertile green where the irrigation of centuries, the flooding of that great river turns the desert into a garden. We descend toward Farouk Field—it was called Payne during the war. Over the big Nile,

flying lower, we can see the sail boats, as old as civilization with their triangular sails pushing them so slowly along.

Farouk Field is big and a great number of C-46's left over from the war lie in the hot sun, unused, slowly rotting to useless metal.

The sun feels warm and good as we get out of the Connie. There is the feeling of a different land; the red fezzes, the long robes, the sound of a strange language, the dark skinned baggage handlers, wide bare feet padding across the ground, it is Africa and it is different from Europe.

Now for a day's sleep and a night's too, then, tomorrow, back to Paris and a day or so after that home to New York, but now New York seems far away.