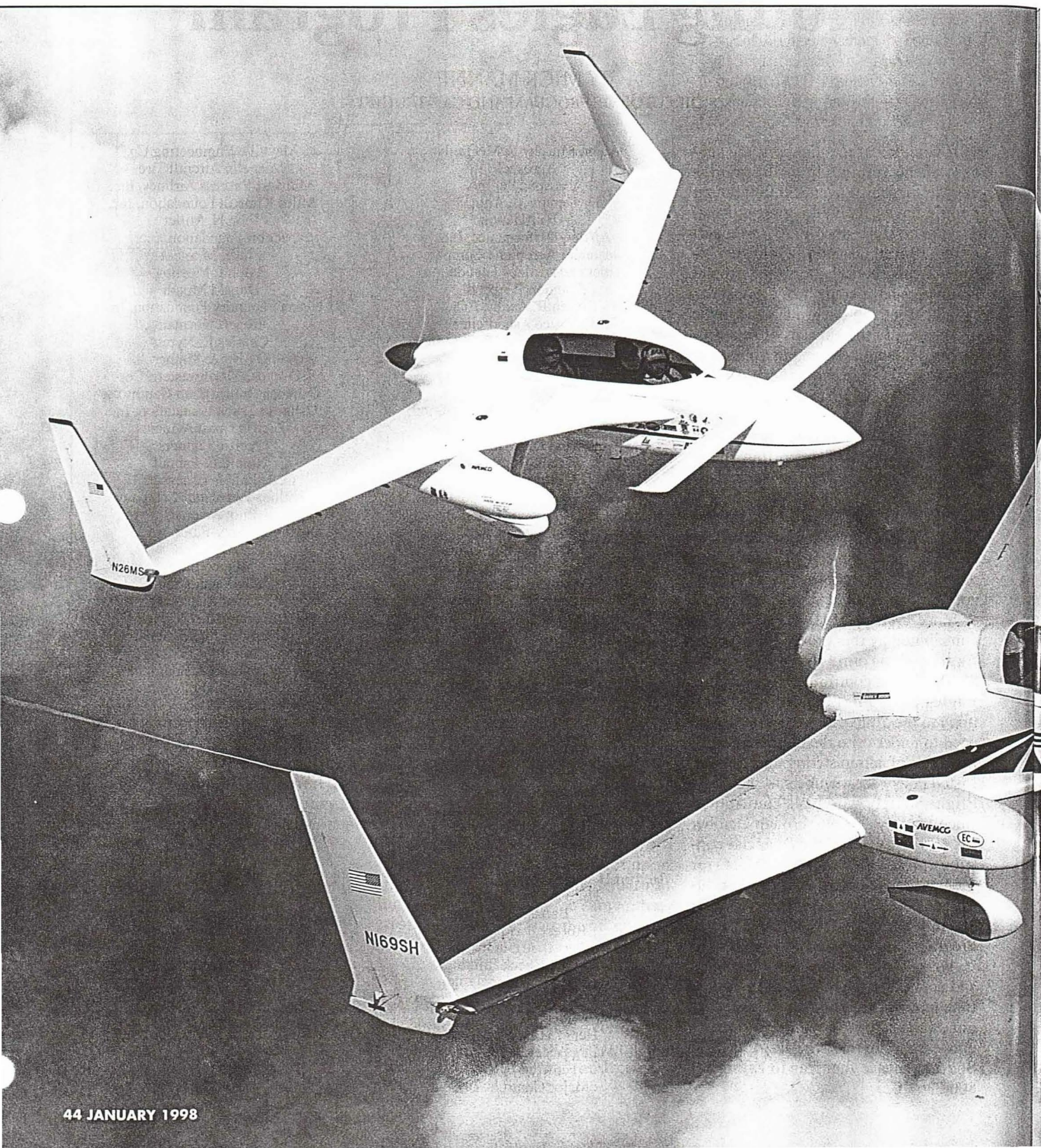


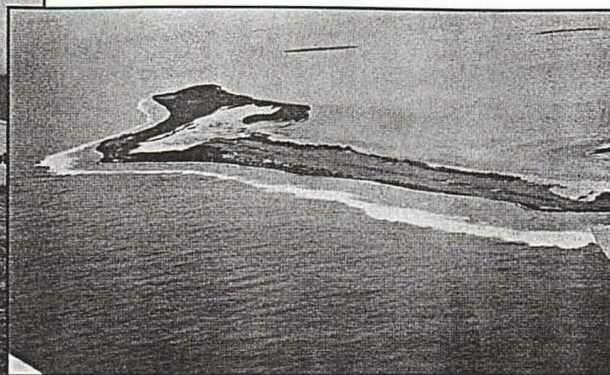
Mike and Dick's

'ROUND THE WORLD EAA





The Aeroclub, St. Denis — Reunion Island, Indian Ocean



The runway and town — Cocos Island in the Indian Ocean — a stepping stone to Australia. Mike and Dick arrived at Cocos after a 17-1/2 hour all night leg!

tures came back down to close to normal.

We had some heavy weather to contend with for the first couple of hours so we spent a lot of time weaving in and out of the build ups, mainly to protect the props from rain erosion. We had had no significant tailwinds since we had departed the U.S., but now, for the first time, we were looking at 47 knots on the tail! This was great news and we were hopeful that we might arrive in Perth in daylight in spite of our late start. I knew Sally, along with Sciona Brown, was anxiously awaiting our arrival, so I sent them faxes every hour letting them know our time to Perth, winds and endurance remaining. It was great to receive email from them, too. Soon we were out of the weather and we could see a very rough ocean below. For me, this was one of the most anxious legs of the whole trip, due to having to use auto fuel which really was an unknown for us. Every five gallons or so we would switch to the avgas and run a gallon or two, which immediately lowered the cylinder and oil temperatures, so we elected to follow this routine for the rest of the trip.

I had an overwhelming desire to turn left and head for the northwest tip of Australia, but the shortest route was to fly direct to Perth, so that is what we did. We knew we were going to run into weather as we got closer because what remained of Cyclone Rhonda was moving east towards southeast Australia, and might even get there before we did. As we got closer, we started to see the west coast on our Flitemap programs, even though we could not see it with our eyes, and it was comforting to know we at least were getting closer to land. Harry Maybeck was guiding us relative

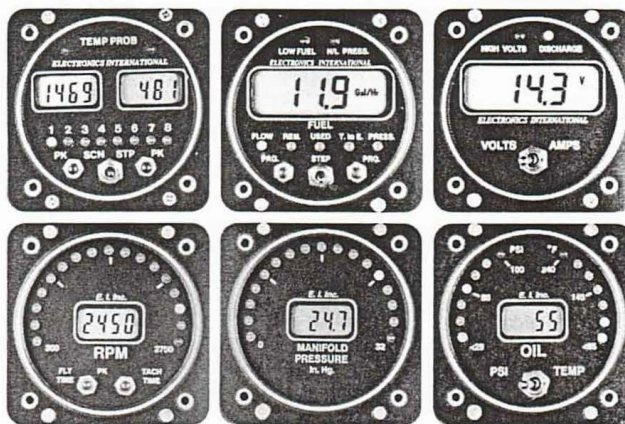
to the approach, and we did do well avoiding a lot of it, but we finally ran into a solid wall of clouds. We decided to try to climb over it. We went to over 16,000 feet and still were not high enough, but we were now talking with Perth approach and a British Speedbird heard us and told us he was climbing in our general vicinity. He was through 21,000 feet and was still IMC, so we

headed down to see if we could scud run under the weather. We were somewhat successful, but eventually were in the clouds in moderate rain, only 400 feet above the ocean. Dick had the lead, and I was flying right on his wing, having to stay within only a few feet so as to be sure not to lose him, and we flew the last half hour into the Perth area like this. ♦

— Continued Next Month —

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FRIENDSHIP TOUR

BY MIKE MELVILL

(PHOTOS COURTESY MIKE MELVILL AND DICK RUTAN)



I began planning this trip almost two years ago. My goal was to fly my Long-EZ, N26MS, from Mojave, CA to the land where my wife Sally and I were both born, South Africa. I thought it would be really neat to be able to visit with family and friends, and be able to show them the plane that we had built from scratch with our own hands. Sally and I began checking on best routes to fly and best time of the year to visit the Southern Hemisphere, with regard to weather, winds, etc. I designed and fabricated two external under wing mounted fuel tanks, necessary to allow us to cross the Atlantic Ocean. I designed and fabricated a new carbon fiber cowl, with "armpit" air intakes, which worked really well. I also removed my old existing instrument panel, and designed and fabricated one which incorporated all of the equipment I felt would be necessary to accomplish such a flight.

About two months before our planned departure date, Sally decided she would not make the trip; it was not really her thing, and she was unhappy with the idea of crossing the Atlantic Ocean. I almost gave up at that point, because I did not think it would be any fun alone. Then I got the bright idea to ask Dick Rutan if he would go with me. He thought about it for a day or two, then he came over to my hangar and we discussed what my plans were; that is to say, just to fly to South Africa and back. He said he would go, but since he was an around the world sort of guy, he thought we should go to South Africa, then press on around the world. I readily agreed, and plotted a new course.

JIM KOEPNICK



Dick and his dad, "Pop Rutan," conduct a last minute check before launch time.

Mike (left) and Dick model their life jackets prior to leaving Mojave.

The last time Dick and I took a flying trip together there was about a 12 knot difference in the cruise speed of our two Long-EZs. We decided that this would be a problem, and that the way to remedy it was for Dick to install a cowling like my new one, and to install a pair of Klaus Savier's excellent wheel pants. Dick had recently installed the same (Klaus Savier/Light Speed Engineering) electronic ignition, and we now found that the two planes were very close, performance-wise. Since time was now of the essence, Dick built his external fuel tanks as slipper tanks, rather than the way I had done mine, and they worked great. We each built a large back seat fuel tank, using 1/4" foam and fiberglass panels. These tanks, plus what we already had, gave each of us approximately 150 U.S. gallons total fuel capacity. This meant that if we wanted to we could slow down and fly for 25 hours, or 4,000 statute miles! This was good news, because we would not have any fuel problems crossing even the largest ocean. This eliminated one of the two biggest concerns of the over-ocean flyer, and we fixed the other—navigation—with three GPS units in each plane. We each worked hard on our planes, right up until we departed from Mojave, with little or no time to really test many of the modifications we had done.

We said goodbye to friends and loved ones and departed from Mojave on April 4, 1997. We flew in good conditions to Midland, TX where we spent the night. The next morning we headed for Indianola, MS where we stayed with Long-EZ builder Jim Hightower and his wife Margaret. We ate great food at the Eat Place in Greenville, and enjoyed the

super hospitality of Jim and Margaret.

Bright and early, we set out for Sun 'n Fun in Lakeland, FL, and we had to work hard to get there due to a strong squall line across the top of Florida. There were a few hairy moments before we broke out north of Lakeland and were cleared to land as a flight of two in the middle of the airshow! Tom Poberezny hosted us and we spent a most enjoyable two days answering questions and looking at beautiful airplanes. Our friends at Mattituck, who had rebuilt both of our engines, suggested borescoping the cylinders before we left the USA, and we were very happy to hear Phillip Haponic pronounce both engines ready for the trip.

We left Sun 'n Fun just in front of a nasty looking storm and flew to Boca Raton where we were hosted by Long-EZ flyer, Dr. Tom Fields, and Weldon Case. We changed oil and filters there before jumping over to Fort Lauderdale, with its much longer runways, for our departure from the U.S. Although not all the way full of fuel, we were heavier than we had ever flown for our takeoff. We were nervous, but the EZs handled it well and we were soon flying over the Bahamas, Puerto Rico and many other Caribbean Islands, including the British Island of Monserrat

where we saw an active volcano beginning to do its thing. In fact, it erupted just a few weeks later. This was an exceptionally beautiful leg, with enough islands that we were never very far from a safe landing site, a good introduction to over water flying for me.

We landed on Grenada at the St. George airport. The people were friendly and all of them spoke good English. Customs and immigration were a snap, thanks to our Jeppesen agent. In the morning we took off and flew around the island, taking photos and video. We crossed Trinidad on our way to the coast of South America, where we descended to 200 feet to get a good look at the expected jungle. We flew for hundreds of miles like this, enjoying the view of a completely uninhabited coastline from a few yards off shore. We flew past the French spaceport, at Cayenne in French Guyana, equivalent to our Cape Canaveral. Soon we could see the mouth of the Amazon River and we crossed at the widest point where it was 184 nm across. In the middle of the river we watched our GPS latitude readout count down to zero latitude as we crossed the

Mike and Dick at Sun 'n Fun '97.



equator. I couldn't cross the equator for the first time in my own plane upright, could I? Rolling inverted as we crossed was irresistible! The river is full of floating debris, very muddy, and reportedly you can get fresh water out of the ocean for more than 100 miles off shore.

Soon we were talking to Belem Approach, and they informed us that the Belem airport was closed due to a thunderstorm over the field. We held north of town for nearly 30 minutes before we were cleared into the Class B, and we ran through some serious rain flying to the airport. They would not allow a formation landing, so we landed separately. Clearing customs and immigration here was the most time consuming of anywhere around the world. We figured

discouraged us from flying from Rio to Cape Town, direct. We certainly had the range, but we were unable to get any reliable weather or winds aloft information at the flight levels we would have to fly. Luiz tried every contact he had to find this information at 10,000 to 12,000 feet, but could find nothing. This worried him (and us!) greatly, and he spent the next several days persuading us to change our flight plan to depart from Recife and fly directly to Abidjan, Ivory Coast. He flew regularly to Abidjan, and could get us very accurate weather and wind information, so it was an easy decision to make.

We spent three days with the Miguez family, and they were marvelous. Sibella cooked us wonderful meals, Fabio drove us anywhere we needed to go and Luiz was a constant source of critical flight info. Luiz also was responsible for the Air Force allowing us to hangar our planes, and for getting us a tour of the Embraer Factory where we saw the new dash 145 jet and the rest of the Embraer aircraft line being built. Luiz had worked there for 25 years as a production test pilot and was very well known. I was

in dire need of a haircut and was able to get it done by the Air Force barber, right there in the hangar where our planes were housed! We changed our engine oil and replaced the spin-on filters, which were mounted directly on the engines using Bill Bainbridge's new 90° oil filter adapters which, incidentally, performed flawlessly.

Due to the relatively short flight to Recife, we did a partial fueling and departed early the next morning. The weather was IMC, so we had to file IFR, but this turned out to be easier than trying to fly VFR! We overflew Rio de Janeiro

on our way up the coast and were amazed at the size of the cities along the way. Recife is an enormous city, with high rise hotels along the coast for many miles. We stayed in a beautiful hotel there and spent two days working with the Brazilian ATC trying to get them to understand that our Satcom transceivers were as good or better than the HF radio they wanted us to have. We could not have gotten around this problem without the help of a local pilot, Captain Almeida, who really went to bat for us and persuaded the authorities that the Satcom was indeed an excellent way for us to do our routine position reports as we crossed the Atlantic Ocean.

After many frustrating hours of delay, we were finally cleared for takeoff. We had hoped to depart before dark, negotiate the known bad weather off the coast while it was still daylight, then fly through the night to Abidjan and land there in daylight the next morning. This was not to be; we took off into a very dark night at the heaviest weight we had ever flown and were almost immediately in the weather, in heavy rain and moderate turbulence. With our wood fixed pitch props, it is essential to reduce prop rpm in rain, otherwise the rain will severely erode the prop leading edges. So, when we most needed the power to climb at our heavy weights, we found ourselves climbing through the darkest cloud I have ever been in, at very low power (2,200 rpm). It took what seemed like a lifetime before we broke out on top to a beautiful moonlit night.

We joined up as soon as we could and tried to settle down for the 15 hour flight. I put on a cheerful CD, and concentrated on the many small tasks I had to do to keep my mind off the fact that I was over the Atlantic, with 2,000 nautical miles to fly before I would see land again. Our Satcoms were a wonderful help here. We found ourselves so busy

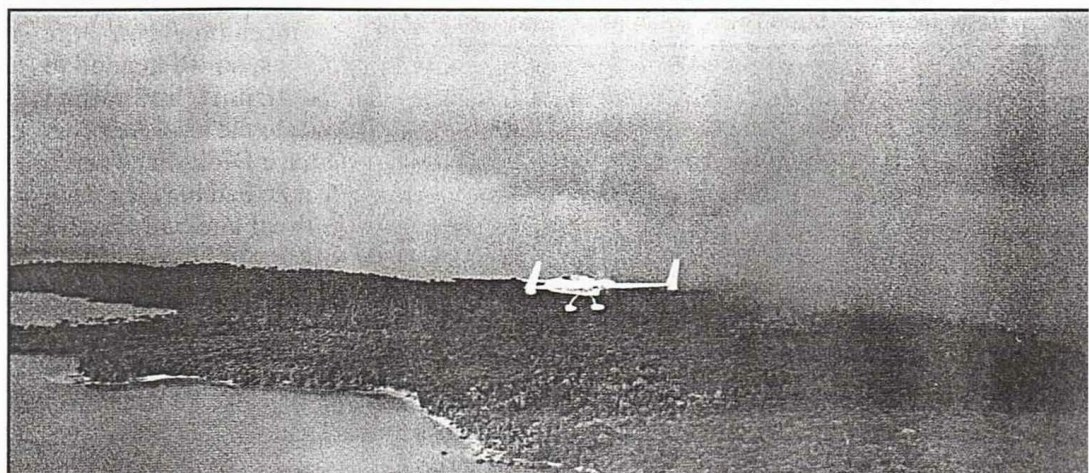


Phillip Haponic of Mattituck checked both engines while at Sun 'n Fun.

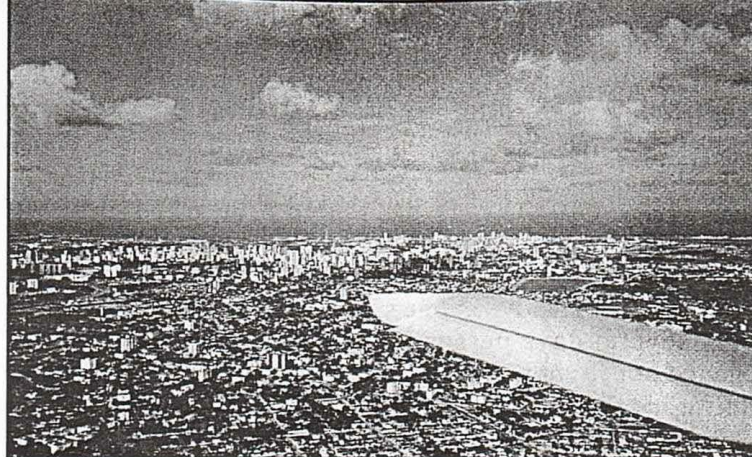
it took just over three hours from cockpit to taxi cab. We spent two days in Belem, visiting all points of interest. The first morning we were awakened to the sound of gunfire and my main memory of this area is that it was hot and humid!

From Belem we flew south across Brazil via Brasilia to San Jose dos Campos, which is just east of Sao Paulo, a huge city of more than 16 million souls. Here we met Luiz Miguez and his wife Sibella. They had been in touch with us before we left Mojave, via the Internet. Their son, Fabio, picked us up and drove us to their beautiful home. Fabio was a great asset and spoke perfect English, having been partially educated in the U.S. Luiz had built a Long-EZ some years before and had flown it across the Atlantic, from Recife to Dakar, Senegal. As a result, he was an extremely useful source of information—and because he is a corporate pilot, flying a Hawker business jet, he had an enormous amount of weather, routing and flight information at his fingertips, which we were very lucky to have access to. He was the one who

Cruising along the coast of Surinam enroute to Belem, Brazil...typical weather off the right wing.



typing messages to ATC and to friends and family that we hardly had time to be scared! I cannot tell you what an uplifting experience it is to see the flashing "Incoming Message" on the computer screen. You wait with great anticipation for the



Recife, Brazil...departure point to cross the Atlantic.

minute or two it takes to download from the satellite and then there it is: "I am with you and will stay up all night to be with you. Fly safe. Love, Sally." I don't believe I could have completed the trip without this incredible piece of equipment. To be able to let loved ones know where we were and what we were doing any time we wanted to from anywhere on Earth was an incredible thing, and I constantly marveled at my luck at being alive at such a time in history. For example, just eight or ten years earlier, we would have had no GPS. Our biggest problem would have been navigation. Now it was literally our smallest problem.

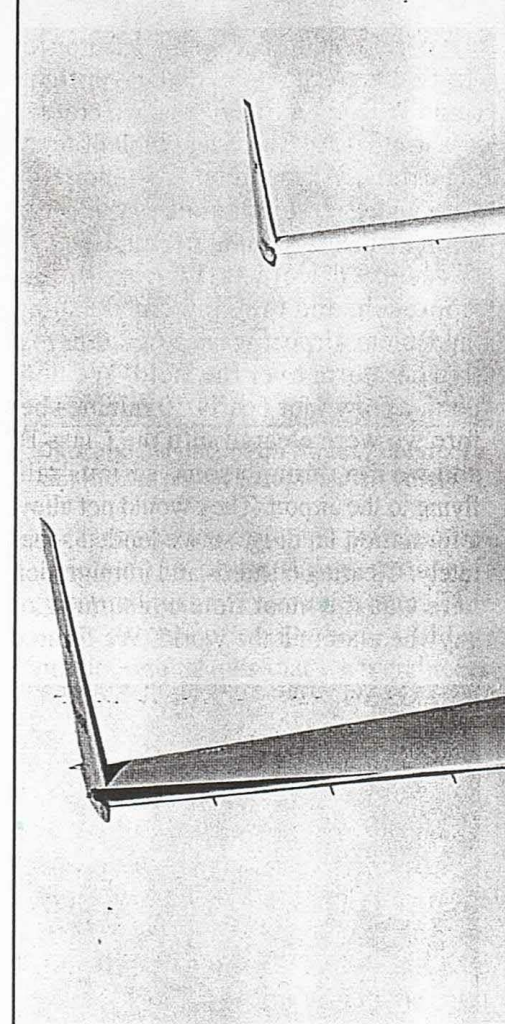
Our primary navigation was the Mentor FliteMap software installed on Toshiba Portege laptop computers, driven by Trimble Flightmate Pro hand-held GPS units. Unless you have flown with this system, you cannot appreciate how incredibly user friendly and simple it is to fly. We each had KLN-90 panel mounted GPS units, as well as the GPS built into the Satcom unit. The hand-held was primarily in case of an electrical failure. The Flightmate Pro runs on AA batteries and we each carried a bag of those! Thank heaven we never needed them!

The Atlantic crossing was a learning experience and was flown mostly on top of a broken to solid overcast in bright

moonlight for all but three hours of the night. The last three hours were very nerve-racking—we could not see the buildups in order to avoid them as we had while the moon was up. I could not believe how dark it was. I literally could not see the canard only 24 inches from my eyes! With no radar, we could not tell where the buildups were, so we just cinched up our seat/shoulder harnesses, and hung on! This was a long three hours and Dick, who was flying off my left wing, had the experience several times of seeing me disappear into a cloud, hearing my cry of warning/fear, but not being able to do a thing to avoid the same fate. We were very fortunate because we never hit a really big one. Eventually, a glow appeared in the east and slowly it got light enough to see and avoid—and not a moment too soon; right in front of us was the biggest thunderstorm either of us had ever seen! We passed south of it on our way into Abidjan, where we landed safely after a 14.8 hour flight.

We were met by a Jeppesen agent, who whisked us through customs and immigration, and dropped us off at an excellent hotel. We were tired and hungry, but our tiredness won and we lay down on our beds, and did not move again until 8:30 a.m. the next morning! We had slept for more than 17 hours!

We needed to do some maintenance on the planes, so we headed to the airport, and taxied over to the local Aeroclub where Dick discovered that he had blown a main oil seal and had lost 2/3 of his oil! Unbelievably, our host, Patrick Dufaud, had the correct seal in stock and he even installed it himself! We

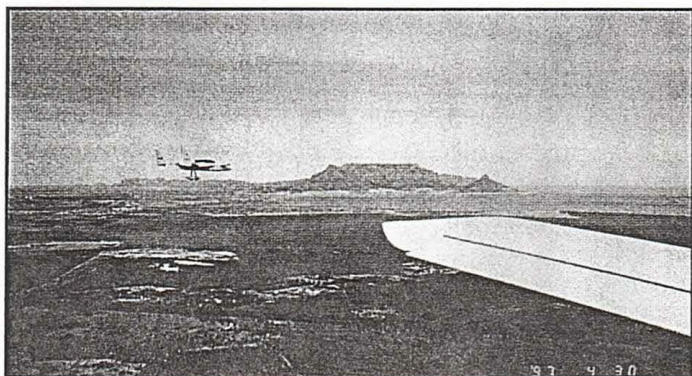


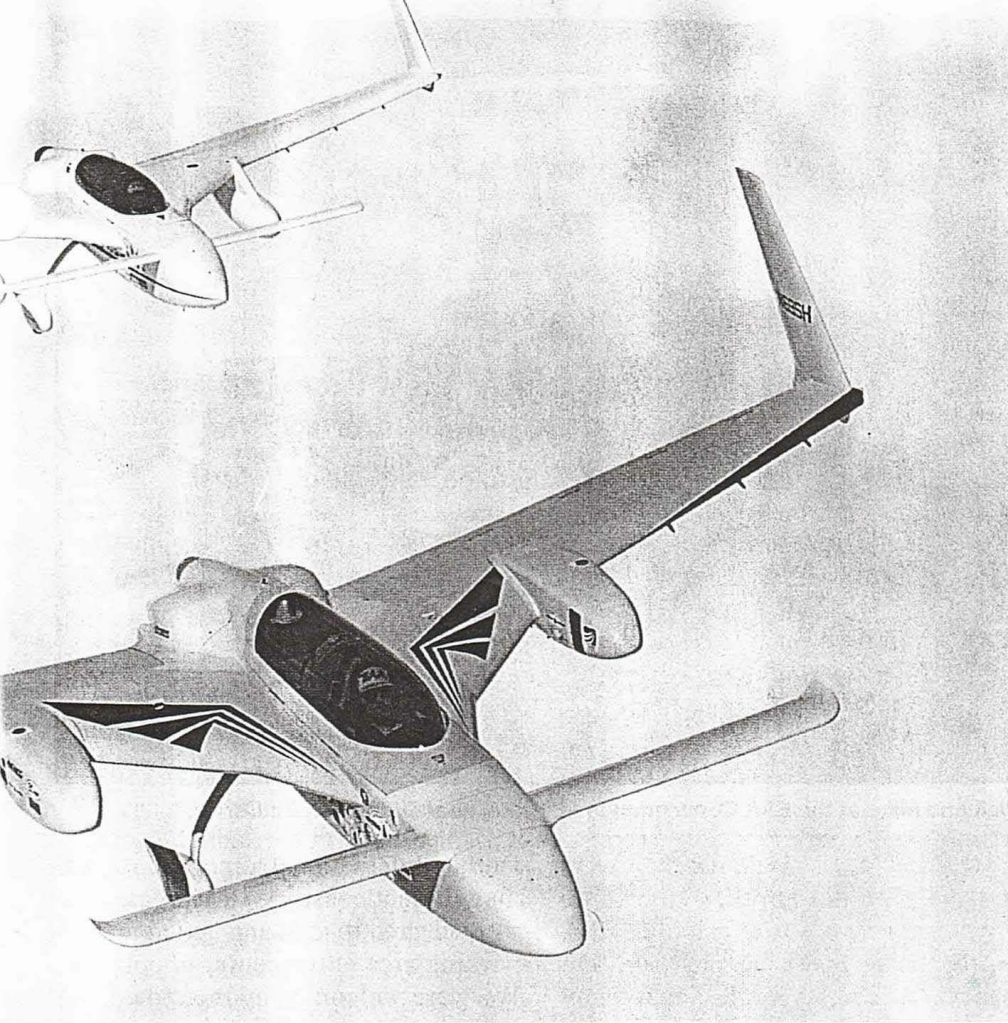
Abidjan, Ivory Coast...charging the computer battery. We did not have a proper adapter!

both changed our oil and filters before taxiing back to our allocated parking places out on the huge concrete ramp where there were no tiedown facilities... we simply had to leave them sitting there. It rained all the following day, at times reducing visibility to just a few feet!

The food at our hotel was among the best we ate anywhere due, of course, to the Ivory Coast being a French Colony and, as everyone knows, French cooking is fantastic. We were fortunate to meet an airline pilot at the Abidjan airport who took us into their briefing room where we were able to see satellite photos of the surrounding area, as well as the upcoming route to Windhoek, Namibia. This was critical for our safety on the

Table Mountain, Cape Town, South Africa.





JIM KOEPNICK

looked like, so we stayed up at our cruise altitude of 11,000 feet as we circled around the sleeping city of Windhoek. Slowly, the glow in the east got brighter and we were able to see more and more of the rugged terrain. We were talking to the controller all the while, and he assured us that we would each be fined \$900 U.S. if we landed before the airport opened! We continued to circle, and then he told us there was a smaller airport much closer to the city that would be open at 8:00 a.m. local time. We headed over there and began our descent, timing our arrival for 8:00 a.m. They did not allow us to land until it was eight o'clock... more than 16 hours since our departure from Abidjan. We still had enough fuel on board to fly to Cape Town with adequate reserves.

We were met in Windhoek by Len McKay, a local pilot and good friend. He got us through customs and immigration in less than 15 minutes, then delivered us to a magnificent hotel. Another local pilot, Peter Hartman, offered to hangar our planes and was extremely helpful as far as local rules for flying, etc. We loved Windhoek, and would definitely go back. The skill of some of the local craftsmen, sheet metal workers, mechanics, etc. beat anything either of us had ever seen. The quality of the average planes parked out on the ramp was amazing... all of them looked new! Airplanes are really important to the people of Namibia, and they certainly do take care of them. We stayed here for three days, then departed for Cape Town, South Africa.

Enroute we saw some of the world's most desolate countryside. We flew for more than two hours over unending

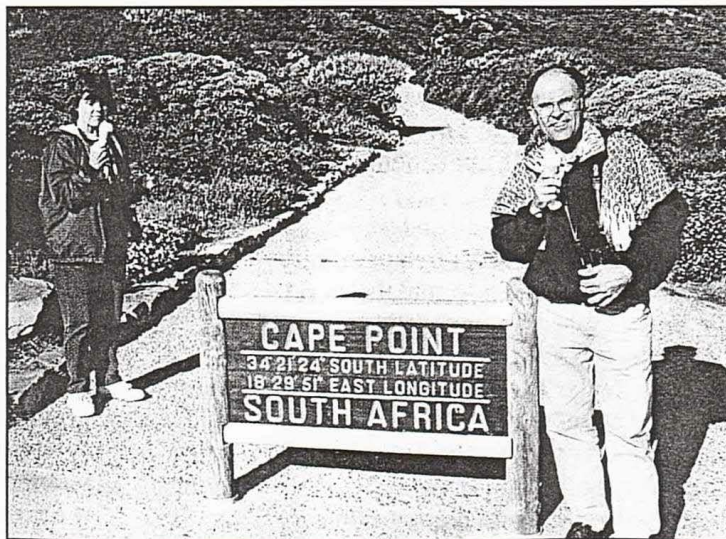
next over-water leg because we were in the inter-tropical convergence zone with no weather radar and, therefore, were blind as far as knowing where the thunderstorms were once we were in the clouds. After fueling, we filed our flight plans, and spent a lot of time studying the satellite weather, especially the IR (infrared) picture. There were two solid lines of storms off the coast, right across our course line. We saw we would have to fly at least 100 miles east to try to get around these squall lines, and we would be clear of the nasty weather by the time we were 400 miles south of Abidjan.

We departed around 4:00 p.m. and flew right up to the nastiest looking wall of weather I have seen, so we turned to the east and flew parallel to this squall line for what seemed like an awfully long time before we were finally able to turn right to head south. We still had to get through the second line of storms... and we were running out of time. The sun was getting close to the western horizon and we had to be through this weather before it got dark. The idea of trying to penetrate this type of weather in the dark was abhorrent to both of us, so we desperately searched for a hole. I found myself down on the deck less

than 100 feet above the Atlantic, and for the first time I could see what we would be facing if we had to land in the water... and I didn't like what I saw! Just as it was getting fully dark, I saw an opening, a lighter area, so I turned and flew under the clouds through some heavy rain and, to my delight, I could see that we were in the clear. I called Dick, and told him I was through, and climbed up into a clear night sky. The full moon was just rising, and the view was fantastic with the moon reflected in the ocean and showing off the scattered clouds far below.

This was a long leg—it took over 14 hours to reach Windhoek, and when we did we were in for a shock; the airport was closed and would not open for two more hours! It was still dark as the inside of a cow and we really had no idea what the terrain

Cape Point, the tip of Africa. Mike and his sister, Bunny, enjoy ice cream cones.





A local television station interviewed the world travelers while at Margate.

400 foot high red sand dunes, then flew down the Skeleton Coast across the border into South Africa. As we drew closer to Cape Town, almost at the southern tip of Africa, the terrain became more and more mountainous and beautiful. Finally, there it was: Table Mountain, the backdrop behind the city of Cape Town, one of the most beautiful cities on earth. I called the tower and we were cleared to land in formation behind a British Airways 747. This was my moment, this was my goal... to land my Long-EZ on the soil of the country of my birth. We taxied to a spot where my sister, Bunny, a bunch of friends and several TV and newspaper reporters were waiting and it was quite an emotional time. We cleared customs and immigration in a matter of a few minutes, thanks to a dear friend, Stiaan Viljoen, who also provided a hangar for the planes. It was wonderful to see my sister and she was as excited as I was to see my plane and me on the ground in South Africa! The TV people were anxious to get some air to air video, so they climbed into a Navajo, and we all took off in formation for the short flight to Stiaan's hangar on the beautiful Stellenbosch airport. We enjoyed an hour or two of meeting all the folks at Stellenbosch, and then we joined Bunny who drove us in to the city of Cape Town where we stayed at a friend's apartment for the next four days.

We were treated to a wonderful sight-seeing tour of the most beautiful city that we saw anywhere around the world. We hiked to the very tip of the Cape of Good Hope, as well as to Cape Point. We ate wonderful food at Boschendal, tasted great wines at Groot Schuur, visited the monument to Cecil Rhodes (of Rhodes scholar fame), as well as his farm and home. There is a lot of history



Dick and Mike at the EAA Convention in Margate, near Durban, South Africa.

in the Cape, and I would dearly love to go back there for another visit some day. We gave a talk to a really fun EAA Chapter on the Stellenbosch airport, and then we were ready for the flight to my hometown of Durban. Bunny flew up on an aluminum tube, while Dick and I flew the almost 1,000 nm trip in our trusty Long-EZs.

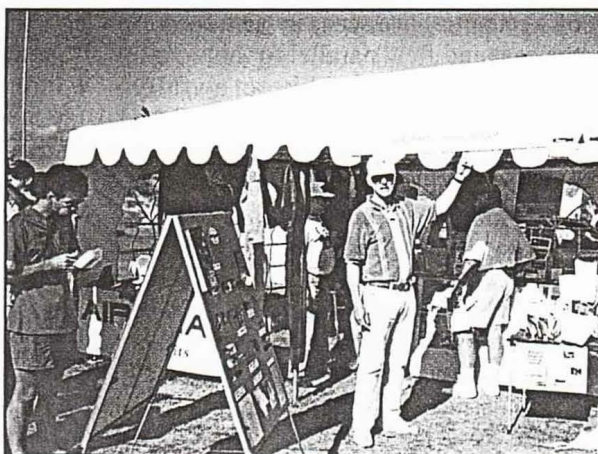
On the way up the coast, we flew over the southernmost point on the African continent, Cape Agulhas, where the Atlantic Ocean becomes the Indian Ocean. The flight up this magnificent coastline brought back a lot of memories of my childhood, and it was a really special moment to touch down on Durban's Virginia airport where many of my friends from my school days were on hand to greet us. We stayed at my late mother's apartment and visited friends and Hilton College, where I was educated nearly a million years ago. It was fun showing Dick the place where I was raised, and we spent a great couple of days swimming in the very powerful surf on the beautiful Durban beaches.

The 1997 Margate EAA Fly-In was held on the Margate airport on the coast, 76 nm south of the Virginia airport in Durban. Dick and I departed from Virginia early on the morning of May 12 and flew in close formation past the

Durban International airport, along the magnificent coastline to Margate. We were cleared to land and taxied up to a parking area at the center of activity. We were welcomed by the crowd and interviewed by the press and TV. A lot of time was spent at our two Long-EZs, answering questions and talking to many pilots and homebuilders, including several Long-EZ and VariEze flyers. We visited the Aircraft Spruce Africa booth, where we met Fran Venter, owner of this branch of Aircraft Spruce. She was great and offered to help us with anything we might need. She was thrilled to see the Aircraft Spruce stickers on both our planes and invited us to visit her company just outside Johannesburg.

There was a surprisingly large variety of aircraft on display, and some great aerobatic performances were

A touch of home! Aircraft Spruce Africa had a booth at the Margate EAA Convention.



flown while we were there. The quality of the homebuilt aircraft we saw was very high, and we could see that the EAA was certainly alive and well here in South Africa.

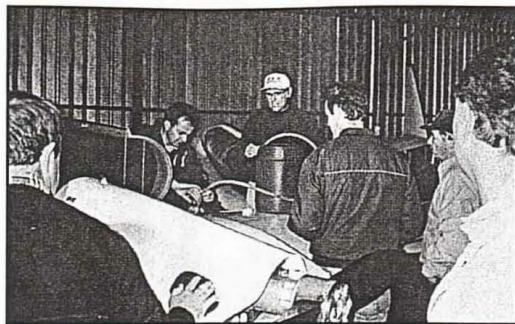
Unfortunately, we were unable to stay over night, as we had to get back to Durban where we were to give a presentation to the engineering class at the University of Natal. We departed late that afternoon with a formation takeoff, followed by a high speed low pass. We then flew low level up the coast to Durban's Virginia airport, skirting some nasty looking storm clouds building up to the north.

Flying inland to Johannesburg where I was born, we landed at the Springs airport and stayed with David O'Neill and his lovely family, close to the Capitol City of Pretoria. We spoke to a great crowd of EAAers here, who then took up a collection to fill our fuel tanks for the next leg. What incredible generosity! We visited all the historic sites, including a gold mine, before heading back to Durban. On the way we overflew Hilton College, which truly is an incredibly beautiful school as seen from the air. We landed at Durban International Airport where all landing and parking fees were waived. We fueled up for the 10 hour flight to the French Reunion Island, east of Madagascar, in the Indian Ocean and spent our last evening in South Africa at a great dinner with old school friends.

Bunny drove us to the airport at 3:00 a.m., helped us load up and after an emotional goodbye, we taxied out for takeoff. We picked up our IFR flight plans and departed into a very dark night. Several hours later, after the sun came up, we ran into the first of two squall lines. Dick and I joined up in close formation, descended to 300 feet over the ocean, then penetrated the lightest looking area. Heavy rain was encountered, but only light to moderate turbulence before we broke out into the clear on the other side of the line of storms. An hour or so later we had to repeat this procedure as we encountered the second squall line, a little heavier weather than the first but not too bad. We thanked our lucky stars that we had not had to do this in the dark! Soon after reaching the southern tip of Madagascar we ran into heavy clouds with rain, and we lost sight of each other. For the next four hours we flew in moderate rain with zero visibility, and we were both very concerned about the ability of our wood props to

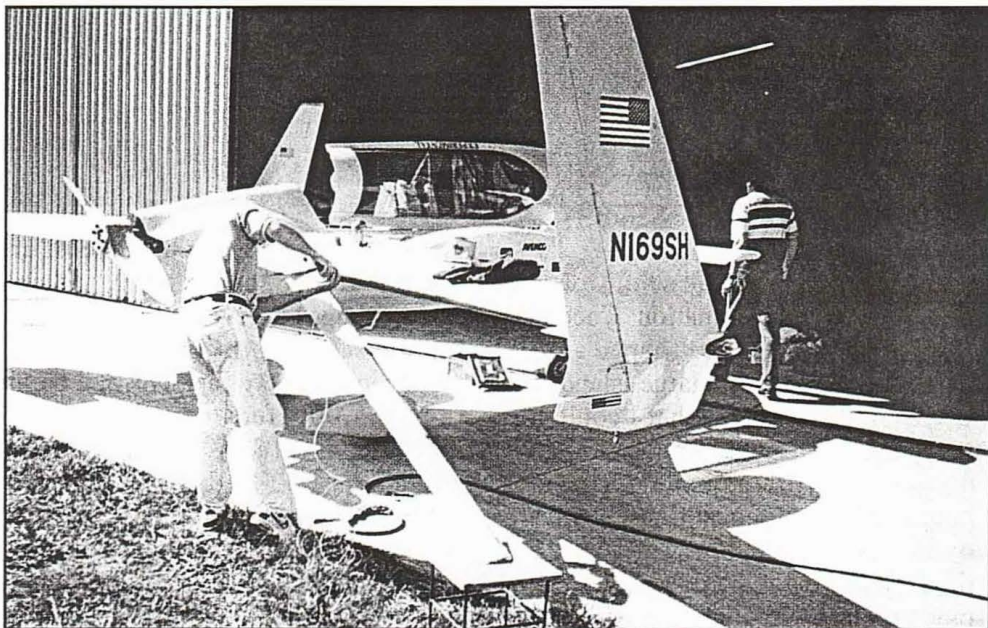
take this kind of abuse. I reduced my engine rpm to 2,000, tightened my seat belt and just plowed on through the rain. Dick initially tried to get low enough to be able to see forward, but eventually gave up and climbed to within 1,000 feet of where I was.

Finally, we broke out between layers, only 60 miles from Reunion Island. Soon we could see the nearly 10,000 foot high volcano on the south end of the island, then we were descending toward the airport on the northern tip of the island near the town of St. Denis. We were met by members of the Roland Garros Aeroclub who helped get us through the usual customs/immigration mess, then led us via several narrow unlighted taxiways to their hangars. We were amazed to find over 100 people waiting to welcome us, including TV and newspaper reporters. We found ourselves drinking champagne and it was at least



Refueling both planes at Johannesburg, South Africa.

time we ever had all five fuel tanks full, our heaviest gross weight takeoff. Just before dark, the rain let up enough for us to depart, so we took advantage of the conditions and I took off first. Initial acceleration was very sluggish, but this was a very long, smooth runway, only a few feet above sea level. Eventually I was able to lift off, having used almost 8,000 feet of the available 11,000 feet. I climbed to 11,000 feet and ran into the

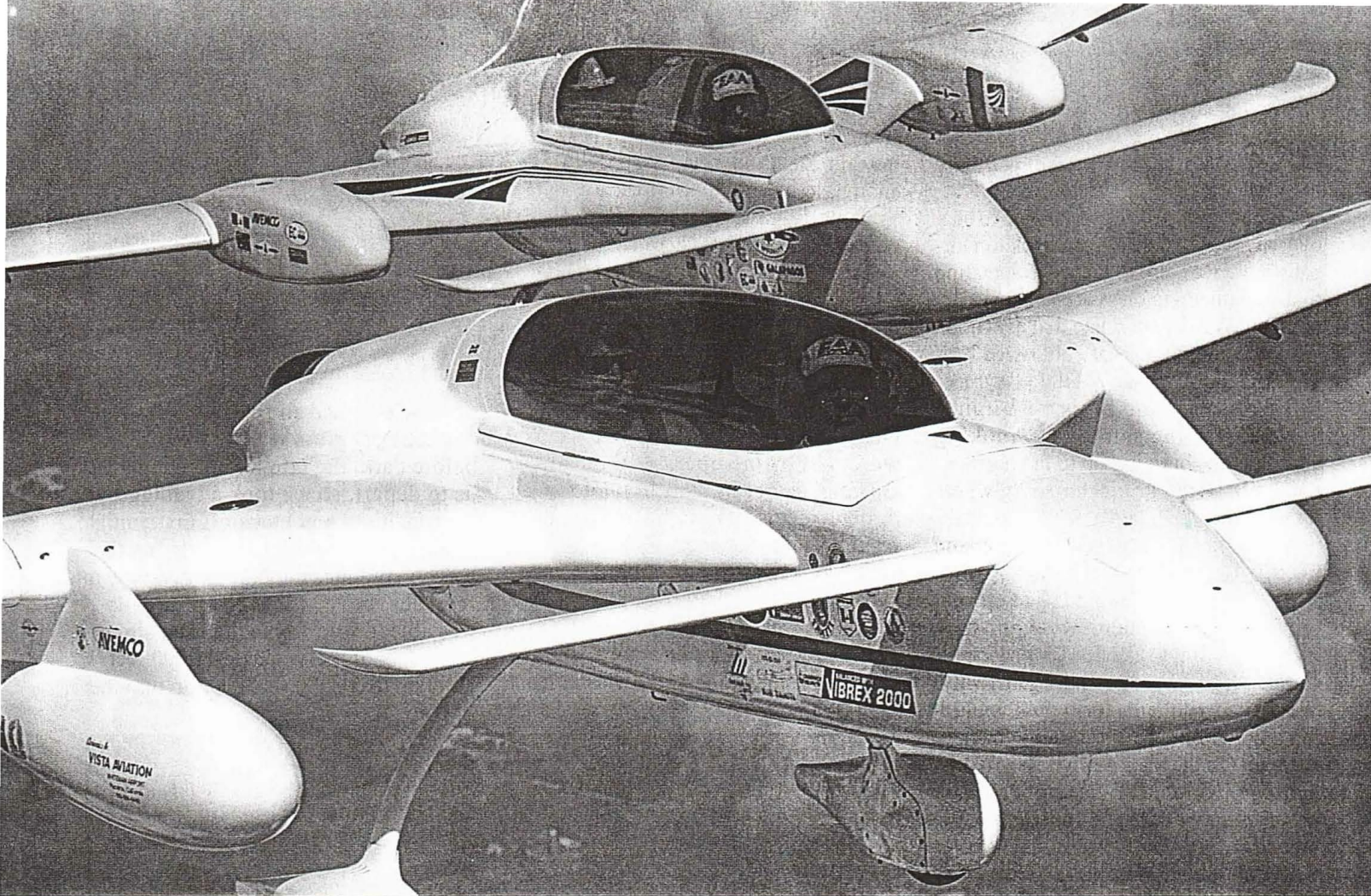


Installing the HF antenna in Dick's Long-EZ—Johannesburg.

two hours before we were able to get the planes put away in one of the club hangars and have one of the members drive us to a really fabulous hotel, Hotel Mercer, run by a very neat person, Daniel Merelle, who put us up free of charge! We spent four happy days here, renting a small car one day and driving it all the way around the island. It rained on and off the whole time we were on the island, due to Cyclone Rhonda which was located between us and Perth, Australia, our planned destination.

We managed to get the planes refueled, in spite of the rain, by holding umbrellas over the fuel caps. This was to be our longest leg and would be the first

same kind of rain we had flown in on the crossing from Durban to Reunion. Dick had remained low and was headed toward the Island of Mauritius. He said there was less rain down there, so I headed down to join him. We flew up the west coast of Mauritius in some of the nastiest weather we had seen so far, but it cleared up just as we turned east around the northern tip of the island. By now it was almost completely dark, and as we climbed to our assigned altitude of 11,000 feet, a solid undercast began to build. It was a beautiful night, and the brilliant Southern Cross was hanging overhead and looked incredible! We flew all through the night with only one



JIM KOEPNICK

period of rough weather.

The sun came up and soon we were approaching our destination, Cocos Island, a small horseshoe shaped atoll. I was expecting to see a large island, but was astonished to find that I could not see it until I was only 15 miles out based on the GPS flitemap. This was a 17 hour flight, the longest flight we made on the whole trip, and we were very tired when we got there. We were in no mood to deal with immigration bureaucrats and were lucky to meet with a very kind customs officer who recognized just how exhausted we were. He helped us get through this ordeal by filling out forms for us and keeping us from having to deal directly with an unreasonable immigration officer who did not seem to care that we had been flying for 17 hours and had had no sleep for 30 hours. It was hot and humid on Cocos Island, and it rained a lot! We were shown to our quarters where there was no air conditioning, but where we were able to get a few hours sleep.

When we went back to the planes, we prepared to flight test some auto fuel, which was the only fuel available on the island. We had arrived with plenty of avgas from Reunion, so we

planned to use this for the takeoff and climb portion of our next leg, and only use the mogas in level cruise flight. We ran our test by putting 10 gallons of mogas in an empty fuel tank and climbing to 5,000 feet over the island, leveling off and allowing the engine temperatures to settle down. Then we switched to the mogas and carefully monitored the engine parameters. It was a no brainer; nothing seemed to change, so I did a little sightseeing and then returned to land.

We spent the rest of the day pumping more than 100 U.S. gallons into each plane by hand, and it was hot work! We had a light dinner and went to bed, planning to be off at 4:00 a.m. When we got up it was raining. We could not even make it to where the planes were parked. We sat around for more than four hours waiting for the rain to let up. Finally, there was a break, so we ran out, threw our stuff into the planes and took off. We climbed to 13,000 feet trying to get above the weather, and after leveling off, switched to the

mogas. To our chagrin the engines did not like the fuel at this altitude; we had cylinder head temperatures rising more than 20° and oil temperatures doing the same thing. On top of that, we found that we had to run our boost pumps virtually continuously in order to keep the fuel pressure in the green. Later, after the fuel had time to cool down to ambient, this problem virtually went away. We had been warned to run our engines 25 to 30% richer on mogas than what we had been running them on avgas, and we were very grateful for the warning. Once I set the fuel flow from my normal 7.5 gph to 9.5, the tempera-

A champagne arrival in Reunion Island at the Roland Garros Aeroclub, St. Denis.

