

MEMBER PROFILE

**MISSION AVIATION
FELLOWSHIP –
UNITED STATES**

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Mission Aviation Fellowship Taps Aviation to Save Others

STORY BY CHRISTINE KNAUER



On the general aviation ramp in Port-au-Prince, Haiti, two injured earthquake survivors wait to be flown to a hospital in Pignon, a small community north of the area. A Haitian MAF staff member stands ready to help load them onto MAF's Quest Kodiak 100. To follow the Kodiak's humanitarian flights, visit www.maf.org.

WEBSITE: www.maf.org

FACILITIES: Headquarters main building: 35,666 square feet; headquarters hangar: 23,600 square feet; avionics shop: 628 square feet

WHAT THEY DO: MAF-U.S. is a nonprofit ministry using aviation, communications and learning technology to bring humanitarian services and Christian teachings to people living in remote regions of the world. The organization's U.S.-based FAA repair station, three overseas avionics shops and A&P-licensed pilots help support MAF's 58 bush aircraft.

EMPLOYEES: 264 personnel worldwide; 129 of whom are licensed A&P technicians

FOUNDED: 1945 by Jim Truxton and Murray Kendon

AEA MEMBER SINCE: 1985



As Haiti struggles to cope with January's devastating earthquake, Mission Aviation Fellowship—United States (MAF) brings help and hope to the people of the impoverished island nation. Even as interest in the catastrophe dims on the world stage, MAF continues delivering lifesaving supplies, shuttling the sick and injured to hospitals, and collaborating with other relief organizations. Aviation makes it all possible.



Founded in 1945, the Idaho-based, nonprofit ministry uses aircraft, communications and technology to bring humanitarian services and Christian teachings to people living in remote regions of the world. Oftentimes, the areas they serve wrestle with poverty, disease, armed conflict and natural disasters, making

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MAF pilot Will White hands a Samaritan's Purse box filled with relief supplies to MAF pilot Michael Broyles. The supplies are being sorted and stored at the MAF hangar in Port-au-Prince.

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the work not only challenging, but also dangerous.

MAF-U.S. is one of many independent air services operating worldwide that share the Mission Aviation Fellowship name and a calling to “share the love of Jesus Christ through aviation and technology.” A loose network has developed over the years with the multinational groups sharing personnel, training, learned knowledge and best practices.

With its fleet of 58 bush aircraft, MAF serves in 31 countries with an average of 101 flights daily across Africa, Asia, Eurasia and Latin America. The fleet consists of King

Air 200 aircraft, various Cessna aircraft, including Skywagons on floats, and five new Quest Kodiak 100 single-engine turbines.

Every six minutes, in some of the most remote places on earth, an MAF aircraft either takes off or lands.

Last year, MAF aircraft flew 34,436 flights, logged 2.59 million miles, transported 104,787 passengers and delivered 9.4 million pounds of cargo to more than 2,500 rough, unimproved dirt and grass airstrips and waterways.

The flights support Christian workers and evangelists, teachers and relief workers, as well as haul food, seed and livestock, transport the sick and injured, and deliver doctors, medicine and relief sup-

plies. In regions without trafficable roads, the aircraft often are the only safe and reliable means of transportation, typically reducing a missionary's all-day trek by foot to a short 20-minute flight, according to MAF.

Creating Rugged, Go-Anywhere Aircraft

Aircraft that fly thousands upon thousands of miles a year into harsh, isolated environments require an enormous amount of attention. This work falls to MAF's four avionics shops, including its locations in Nampa, Idaho, which has three technicians; Shell, Ecuador; Sentani, Indonesia; and Central Asia, which together have six technicians.

“Our avionics shop is part of the worldwide maintenance and support of our MAF aircraft,” said Tim

Dyk, avionics manager of MAF, who oversees the avionics shops.

“Our main FAA repair station is located at our headquarters in Nampa, Idaho, but we also maintain several radio shop locations overseas where we are able to directly support our aircraft as well as provide communications — both HF and VHF — to jungle villages, mission stations and hospitals,” he said.

Before an MAF plane is dedicated for service in the field, the group’s technicians spend up to four months equipping it with the necessary modifications. The dozens of modifications feature a variety of avionics and structural reinforcements, and often include:

- Six-point EGT/CHT gauge for monitoring the exhaust gas and cylinder heat temperatures
- High-frequency radio for long-distance radio transmission
- Strikefinder or Stormscope for weather avoidance
- GPS-based flight information recorder
- Recognition light for improved visibility
- Starter warning light
- S-frame seats to absorb the impact force of emergency landings
- Seat belts and shoulder harnesses
- Windshield V-brace and float-plane reinforcements for added rigidity
- Stainless steel door sill reinforcements to protect the aircraft during loading
- Plywood floor for durability and ease of maintenance
- Short takeoff and landing kit
- Large tires for operating on rough or soft airstrips

- Slip marks on main gear tires to give a visual indication during pre-flight inspection if a tire has slipped on a wheel

- Gravel guards to keep mud and rocks off of tail control surfaces
- Stabilizer boots to protect the leading edge from rock damage
- Cargo pod
- Flint tanks for longer flight range and increased weight capacity
- White paint with red and blue trim for easy spotting against jungle foliage
- Survival kit

“Communications also has become an essential element of our aircraft,” Dyk said. “We need to communicate with remote hospitals and missionaries, but not just on the VHF frequencies that air traffic control uses; so, (we use) HF radios shortwave, single-side band radios as the standard for all aircraft and all ground stations. With these HF radios we are able to make contact across hundreds of miles.”

Satellite flight-following, including Iridium satcom phone and messaging, works well between the aircraft and the satellites all around the world; however, Internet connections in remote locations are less reliable, according to Dyk. MAF’s avionics technicians modify the smaller aircraft so they can both communicate and navigate in jungles.

To help track flights in Haiti and around the world, the ministry is experimenting with several new satellite flight-following systems, including Blue Sky, EMS Sky Connect, SkyTrac, Spider Tracks, SPOT, and TracPlus for both transoceanic ferrying flights and for continued

flight-following in remote areas.

Operating aircraft in countries all over the world has its regulatory challenges, too. MAF continually works with the various civil aviation authorities to meet any additional standards.

“Even though many of the FAA and ICAO standards are used in a country, there are always some specifics to meet with each country to pass their inspection standards,” Dyk said. “Often the approval paperwork takes longer than the installation work.”

To help Mission Aviation Fellowship continue its work in Haiti and other places around the world, visit its website at www.maf.org.

Because of the remote operations, all MAF pilots are required to be licensed A&P mechanics. To support the avionics, the ministry’s technicians travel to the aircraft and work on-location.

“The avionics technicians in our AEA shop repair radio sets and perform avionics upgrades here at our main headquarters in Idaho. In addition, each of us travels overseas on an average of three times a year,” Dyk said.

Two of MAF’s radio technicians recently returned from a month of avionics installation work in Mo-

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zambique, while Dyk just returned from Mongolia where he performed aircraft inspections and certifications.

“Next month, I will leave for Western Congo — the Democratic Republic of Congo — to perform an avionics inspection on a Cessna that was purchased in the Netherlands and ferried to Africa in February,” Dyk said.

Helping in Haiti

Working around the world, MAF’s presence in Haiti isn’t new. For 23 years, the organization’s Christian outreach has brought in basic services and supplies, as well as helped train local church leaders. Before the earthquake, seven MAF missionary families, seven Haitian staff

members and three aircraft served 16 airstrips from a base of operations in Port-au-Prince, close to the earthquake’s epicenter.

In the aftermath of the disaster, MAF used its knowledge of Haiti’s geography, culture and languages to assist other groups in providing aid. MAF established a satellite communications center at the Port-au-Prince airport, providing communications for relief agencies.

Just after the earthquake struck, MAF’s avionics technicians quickly installed an HF radio on a new Quest Kodiak 100, as well as repaired and inspected avionics for other aircraft based in the region.

MAF set up its hangar in Port-au-Prince to serve as a logistics point for aid organizations bringing in food, water, medicine and other relief supplies, and organized flights to

transport teams of medical and relief workers to remote areas.

On Jan. 21, John Woodberry, disaster response and security manager for MAF, wrote, “The grassy field in front of MAF’s hangar has been a hive of activity as our facility is the center of operations for receiving and coordinating delivery to many missions and aid organizations... Cargo from a C-130, a DC-4 and a Cessna Caravan has been delivered to orphanages, hospitals and a mission station, all of which had run out of supplies...MAF coordinated 16 flights and around 130 passengers today.”

According to Barb Bowman, director of marketing and communications for MAF, “The ongoing relief effort in Haiti necessitates support on many levels including prayer, technical expertise and finances.” □