

Honeywell

DU-875 IMPROVES SAFETY AND RELIABILITY FOR JETCITY MEDEVAC FLIGHTS

Melbourne operator gains STC to fit Honeywell avionics upgrade on Learjet 40/45s

“During the creation of our STC we had a close relationship with all levels of Honeywell, from the administrative side and commercial operations right through to the highest engineering levels.”

Lorne Cole, founder and CEO, JetCity





Overview

When Melbourne-based JetCity wanted to extend the life of its Learjet 45s, it enlisted the support of Honeywell to gain a supplemental type certificate (STC) to upgrade the aircraft's avionics systems with the latest DU-875 LCD cockpit displays. The STC means JetCity can now carry out upgrades for other Learjet 40 and 45 operators.

Quick Facts

Honeywell Solution

- Primus Elite DU-875 upgrade

Customer Results

- LCD display for greater clarity and precision
- Increased reliability and safety
- 7.7 lbs lighter for improved fuel consumption
- Extended life for Learjet 40 and 45 aircraft

Why JetCity chose Honeywell

- This was an upgrade to an existing Honeywell avionics suite

Customer

- Name: JetCity
- Location: Melbourne, Australia
- Industry: Private jet charter and medical evacuation
- Website: www.jetcity.com.au

Background:

JetCity is an aircraft charter and engineering organization based in Melbourne, Australia. It was formed in 1990 with a Learjet 24 and its current fleet consists of Cessna Citation X, Gulfstream IV, Learjet 36 and Learjet 45 aircraft.

The company provides jet charter for business and private clients and also offers aircraft management services. But for the last 20 years, its predominant work has been medevac operations.

Medevac operations involve the transportation of injured patients from the scene of accidents or patients from rural hospitals to better-equipped facilities. It also repatriates people who are taken ill away from their home country.

With seats replaced by stretchers and medical equipment, JetCity's Learjet 45s can be quickly transformed into air ambulances and fly some 500 hours a year, covering Australia, South East Asia and many outlying Pacific islands.

"We've flown as far away as the Middle East and the Seychelles in the retrieval of Australians who were injured abroad," said JetCity founder and CEO, Lorne Cole.

"The Learjet is the ideal airframe for medical evacuation work because it's close to the ground for loading and unloading patients. It's easier than bigger aircraft, and is efficient and highly reliable."

The pressures of operational readiness and reliability are paramount for JetCity's medevac work and it's also important that the Learjet's instrumentation enable the aircraft to fly safely in and out of demanding locations.

Solution:

JetCity's Learjet 45s were equipped with the Honeywell DU-870 avionics suite that is becoming obsolete.

Looking to the future, Cole decided to extend the lives of the aircraft by upgrading the cockpit display from the DU-870's cathode ray tube (CRT) to the liquid crystal display (LCD) offered by the Honeywell Primus Elite DU-875.

Having upgraded its two Learjets, JetCity has achieved a supplemental type certificate (STC) to provide Learjet 40/45 display unit replacements for other operators.

"We worked closely with Honeywell on this project," said Cole. "Here in Melbourne, we're a long way away from a Honeywell office and that could mean three to five days waiting for parts."

"A couple of years ago, we were approached by Honeywell with the view to working more closely together. We were offered the opportunity to become a dealership for the region and took it up."

"Initially, our resources to perform this STC were very taxed. However, we've now got great certification teams in Europe, here in Australia and in the US. For future projects this is going to afford us the ability to generate these STCs more quickly."

Honeywell DU-870 CRT display units can now be replaced using the JetCity Engineering DU-875 LCD drop-in replacement STC without the need to modify the aircraft. The drop-in replacement is offered in three ways – for the primary flight display, primary flight and engine indicating and crew alerting system (EICAS) display or for all display units.

"We worked very closely with Honeywell throughout the development of the STC," added Cole. "The company has assisted us with the documentation required to complete the certification and provided all the background engineering resources that we've needed for various worldwide aviation authorities."



“Honeywell’s design team has been excellent, always answering any questions and queries. We have relied heavily on the team to provide the back engineering that we’ve needed to make this happen.”

Benefits:

“Although the Learjet 45 has a very advanced cockpit, the DU-875’s liquid crystal display offers increased reliability and safety, which are two main factors of our operation,” said Cole.

The form-fit plug-and-play LCD upgrades contribute to fuel savings as they are 7.7 lbs lighter than the original CRT displays, and they are also considered to be twice as reliable. They extend the life of Learjet 40/45 models and allow their avionics systems to be brought up to more current specification, including the display of Jeppesen navigation charts.

The vivid and more precise screens display graphical information within the pilot’s primary field of vision to improve safety and operational efficiency and they are field replaceable for minimum downtime.

Legacy display formats are retained, which removes the need for additional pilot training and the upgrade will also give future access to enhanced functionality including maps and SiriusXM weather overlays.

All customers buying the JetCity Learjet 40/45 DU-875 drop-in replacement STC automatically receive upgrade documentation for the enhanced Primus Elite advanced functionality at no extra cost.

Enhanced functionality that JetCity is working on as part of its STC will mean that the display can be rated as a Class 3 electronic flight bag (EFB).



This means that map and chart information will be available to flight crew on the display with the aircraft’s position displayed. This improves safety when taxiing at unknown airports, particularly at night, and means that pilots can operate comfortably for longer periods.

“The improved avionics of the DU-875 assist us with our medevac flights because they’re often at very short notice. We can be asked to depart to a foreign destination within 90 minutes of an activation, often at night and in bad weather,” explained Cole.

“The improved display clarity and the data available on those displays really makes it a lot easier for the flight crew to become familiar with the airport that they’re operating into.

“When I looked at the new screens I couldn’t believe the clarity. They looked twice as clear as the previous CRT screens and that is a major safety improvement for us.

“The new DU-875 and the systems that drive it are just phenomenal. We can zoom in and zoom out and we’re able to look at airspace boundaries, which we couldn’t do with the previous system. It’s just a vast improvement and it enhances situational awareness while you’re flying.”

Looking to the future, Honeywell has laid down very specific phase implementations for various iterations of the DU-875 and upcoming software and JetCity is in constant discussions on what those progressions should include for the Learjet 40 and 45.

“I’m really proud that we were the first in the world to incorporate these screens in our aircraft. We now have two aircraft flying with the enhanced functionality of the DU-875. It makes the aircraft more comfortable to operate, which makes them safer aircraft and that’s what we’re always looking for,” concluded Cole.

Honeywell Aerospace
1944 E. Sky Harbor Circle
Phoenix, AZ 85034
aerospace.honeywell.com

A41-0889-000-000
© 2017 Honeywell International Inc.

Honeywell