

Harness Untapped Fuel-Savings Potential

Many owners of transport refrigeration units (TRUs) may use only the basic functionality of their reefer, even though their TRU's microprocessor controller comes loaded with sophisticated software that operators can access to significantly reduce fuel consumption. "If you dig into it, there are a lot of programs in there that will allow you to really tweak it for your specific operation," says Carrier's David Kiefer on Big Truck TV, an online video network. In a segment entitled, "Unleash Your Reefer's Inner Fuel-savings Potential," Kiefer discusses door-switch options that conserve energy and software applications that intelligently toggle between start-stop and continuous modes. Learn fuel saving tips by [watching the video](#).



CARB Update

At a recent workshop on its Airborne Toxic Control Measure (ATCM) for TRUs, the California Air Resources Board (CARB) reported that from 2010 through March 3 of this year it conducted about 11,000 TRU compliance inspections and issued about 3,000 citations. Although CARB is currently considering potential amendments to its rules, fleets operating in California must still keep equipment updated for emissions control in accordance with the ATCM. If you have any questions, you may review options with your Carrier Transicold dealer.

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e APX™ Control System: Future Forward with a Personal Touch

The world's largest heavy-duty trucking event recently served as the introduction of Carrier Transicold's latest technology for transport refrigeration units (TRUs), the innovative APX™ control system.



"The APX system combines future-forward technology with a personal touch," said David Kiefer, director of marketing and product management for Carrier Transicold, in introducing the system at the 40th annual Mid-America Trucking Show held in Louisville, Ky., last month.

"From a fleet and driver perspective, it's the easiest yet to program and use," he said, "and it provides exceptional temperature management for any hauled commodity, especially when users take advantage of popular optional Carrier applications, or 'apps.'" These apps include IntelliSet™ for ease of use, Range Protect™

for added fuel optimization, and DataTrak™, which enables wireless monitoring, control and data transfers, as well as interface with telematics providers for Wi-Fi, RF, cellular and satellite communications.

The system is the first from Carrier to offer a USB port for convenient software installations, updates and trip data downloads. [Learn more about how the APX Control System can benefit refrigerated haulers.](#)



Scenes from the 2011 Mid-America Trucking Show

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APX™ Control System: Future Forward Technology with a Personal Touch

When we ask customers what they want in terms of trailer refrigeration unit control, we often hear many things from different stakeholders – fleets, drivers, owner/operators, dispatchers and maintenance technicians. They tell us they are interested in more customization of refrigeration configurations. They want features that not only deliver great temperature control, but also optimum fuel efficiency. They also want the controls to be easy to use. In fact, some want them to be more mistake-proof for drivers.

Technicians want refrigeration units to be easier to troubleshoot, diagnose and repair – issues that will not only save them time and also increase unit uptime. And everyone wants equipment to be even more reliable. “Oh, and while you’re at it,” they say, “how about protecting me from obsolescence?”

Carrier Transicold’s new APX™ Control System responds in many ways! Here’s a snapshot of what it offers:

- Even higher durability and reliability;
- A bigger, brighter, information-packed display;
- A simple user interface with menu-driven inputs;
- Convenient data exchange via USB;
- Greater memory;
- Enhanced TRU diagnostics;
- An expanded range of “apps” for unit customization and fuel efficiency optimization.



Pronounced “apex,” the APX control system has an entirely new modular hardware configuration making it the first TRU control to use distributed electronics. Its display module, with illuminated information “dashboard,” is easy to read at a distance, offers push-button simplicity and, with fewer keystrokes displays five times the information of competitive equipment. The display module also features a USB dock to facilitate data downloads and software uploads.

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easiest yet to program and use, and it provides exceptional temperature management for any hauled commodity, especially when users take advantage of popular optional Carrier applications, or ‘apps.’”

Just a few of the Carrier’s apps include IntelliSet™ for ease of use, Range Protect™ for added fuel optimization, and DataTrak™, which interfaces with telematics providers for Wi-Fi, RF, cellular and satellite communications.

The APX control system also introduces several new apps, including its dedicated Virtual Technician™ comprehensive diagnostic software, which runs continuously in the background, monitoring the TRU to help to avert system problems. The new Driver Mode app gives Fleet Managers the ability to customize the display to allow drivers as much or as little access to the microprocessor’s operations as the fleet manager desires.



Virtual Technician



Driver Mode

New Modular Architecture

From a hardware perspective, APX takes what was formerly housed in a single large metal control box and more efficiently splits it into compact, sealed sub-components – the aforementioned display module, the main microprocessor module and a power-control module, to name a few. The microprocessor is driven by a powerful operating system, familiar in many ways to users of Carrier’s Advance™ controllers.



Main Micro Module

CAN-bus communications protocols make system expansion – adding modules for expanded capabilities – as simple as plug-and-play. A system manufactured today can be easily upgraded with future hardware capabilities by adding new modules in “daisy-chain” fashion.

Enhanced for Operator Ease

Human interface is improved with the APX display module’s vivid graphical dashboard, the industry’s largest. The backlit LCD display has a 14 percent taller area than its competition, making it easier to read. It continuously shows operating status via the multi-language “message center” with more than 300 instructional and informational driver prompts in the user’s choice of English, Spanish, French or Portuguese.



Large raised silicone backlit buttons and menu-driven simplicity help minimize operator error. Like an ATM (automated teller machine), the APX display module has dedicated menu-function buttons linked to prompts in the display’s dashboard screens. This approach results in a significant reduction in keystrokes to access various functions and types of information. New and exclusive with the APX display module is the ability to view data recorder trip graphs – an at-a-glance visual indicator of conditions within the trailer throughout a delivery run.

In future editions of eFlash, we’ll explore the APX control system design, features and apps in even greater depth. In the meantime, for more information or to find out how the APX control system can enhance your operations, turn to the experts within the Carrier Transicold dealer network.

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