



## **PRODUCT CATALOG**



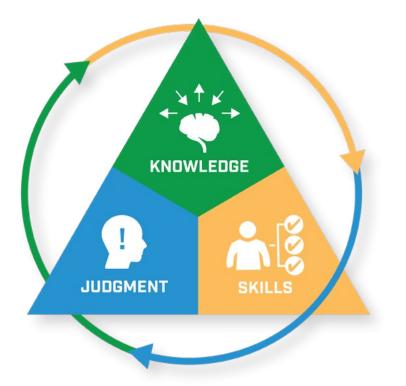








#### SIMULATION TRAINING APPLICATIONS AND USE CASES



Simulation training requires student operators to apply their knowledge, skills, and judgment in a way that facilitates learning. With an active learning environment, student operators are provided a chance to learn-by-doing, while learning from each other.



IMMERSIVE EXPERIENCE Practice until perfect.



WORKFORCE DEVELOPMENT Advance together.



MEASURABLE RESULTS Through equitable evaluations.

## PHASE 1

#### DISCOVER

# Q

#### EXISTING PROGRAM REVIEW:

Understand agency New-Hire, Remedial, & Refresher trainings.

#### INTRODUCE



PRE-SHIPMENT REVIEW:

Dedicated time to review the simulator. Provide feedback prior to fielding.

#### PHASE 2

#### INTEGRATE



TRAIN-THE-TRAINER: Implementation and functional use of the simulator as a training tool.

#### х S X

**ADVANCE** 

REVISIT AND REINFORCE: Ensure training objectives have been identified and are being met.

## **CUSTOMER ONBOARDING**

# Readying the Customer to use Simulation

To help customers integrate a simulation training tool with an existing training program, FAAC provides a customer onboarding process.

The phases aim to initiate the discussion around the current state of training, familiarize the customer with their system, train their instructor staff, and reinforce the learning objectives.





# The most realistic training experience available

The MB 2000 Bus Simulator is the highest-fidelity simulator available for training transit bus operators. This fully customizable system provides a true-to-life experience that prepares operators for real-life driving environments.



- Entry Level Driver Training
   Curriculum
- OEM ZEB Vehicle Catalog
- Flat Glass or Monitor Mirrors
- OEM Driving Experience
- Full Motion Cab
- **RESPONSE SIMULATOR:** Embedded passenger interaction simulator that prepares operators for realistic passenger interactions





The Paratransit simulators are created from a de-commissioned vehicle, donated by the customer. The MB 2000 and paratransit cabs are interchangeable so you can swap this paratransit cab using the shared system resources, or it can be purchased as a standalone training system.



- Cab Swappable with MB 2000
- Repurpose an Inoperative
   Fleet Vehicle
- Introduce ADA Guidelines and Passenger Assistance Training
- Full Motion Cab
- RESPONSE SIMULATOR: Embedded passenger interaction simulator that prepares operators for realistic passenger interactions





The MB 1000, with its more than 225-degree field-of-view capability, realistic dash controls, and optional motion system, is a testament to the innovative solution FAAC provides to the transit industry.



- Entry Level Driver Training
   Curriculum
- Compact Equipment
   Footprint
- Digitally Rendered Mirrors
- Functional Levers, Gauges & Switches
- Integrated Motion System





FAAC's Response Situational Simulator is developed in concert with the customer. FAAC coordinates with instructors to storyboard impactful scenarios. FAAC provides a full crew with professional film equipment to capture the scenarios on-site with the customer, ensuring the scripts are on message and accurately captured. The final product is a training tool that challenges the trainee while reinforcing policies and procedures.



#### Operator Response Training for Passenger Interactions

- Scenarios are filmed purposefully - challenging the trainees to recall and enact IAW policy
- Operator manages situations from the driver's seat
- Reinforce procedures for de-escalation, emergencies, and communication techniques
- Assess trainees response tendencies





The TT 2000 Truck Simulator is the highest-fidelity simulator available for training truck operators. This fully customizable system provides a true-to-life experience that prepares operators for real-life driving environments.



- Enclosed Driving Experience
- Accurate Spatial Layout
- Accurate Visual Obstructions
- Flat Glass or Monitor Mirror
   Options
- Full Motion Cab
- OEM Application Controls (Snowplow and Garbage)





The TT 1000, with its more than 225-degree field-of-view capability, realistic dash controls, and optional motion system, is a testament to the innovative solution FAAC provides the Transportation industry.



- Operational Truck Controls with Functional Gauges & Switches
- Digital Dash for Various
   Configurations
- Virtually Rendered Mirrors
- Integrated Motion System
- Generic Application
   Controls







- 1-for-1 Cab Replica with Authentic Controls for North American Light Rail Operator Simulation Training
- Geo-Specific Training
   Environments
- Accurately displays operator location, preceding train, signals, signs, stations, switch state, faults, events and current route





The Desktop simulator provides a compact design that is easily transportable. This simulator can be deployed at scale, providing classrooms of student operators a chance to learn a wide variety of simulation activities collectively.

#### **DESKTOP TRAINER**

- Optional Configuration for all Transportation Simulators
- Compact Equipment
   Footprint
- Simple Setup and Transportable
- Ideal for Introducing
   Simulation

#### Powered by FAAC

dit	Sim Time	Assessed Item Name		Description	Instructor Override	Instructor Comment
EDIT	0:00	Following Distance Test	Distance Less Than 3 Seconds	Keep a Safe Following Distance	Override	
EDIT	0:23	Use Turn Right Signal	Used Turn Signal	This is to Test Turn Signal Use		
EDIT	0:32	Front and Rear Right Tires in Region	Front Right and Rear Right Tires in Region	Both Front Right and Rear Right Tires Should be Inside Region		-

1	Thomas		Average SCORE 43 % ge Score				
Miles Driven <b>8.721</b>	avg score 43 %	Best SCORE <b>92</b> %	Worst SCORE 1 %				
Scenarios Completed 17	AVG Energy SCORE <b>48</b>	Best Energy SCORE <b>87</b>	Curb Kicks <b>4</b>				
Energy Regen							
	gy Use Acceleration (PATENT P		y Regen Braking				

#### Maximizing training with proper technology

VITALS acts as an interactive playbook for the instructor. It helps them engage each trainee objectively, implementing the policies that operators should learn, and identify areas of strength and improvement.



#### Virtual Instructor Trainee Assessment & Learning System

- Capture and Monitor Student
   Performance
- Standardized and Objective
   Assessment Process
- Determine Proficiencies Demonstrated by Student Operators
- Operator Performance Dashboard Recommends Areas for Improvement

# THE VALUE OF SIMULATION TRAINING





#### NEW-HIRE ACCIDENTS DECREASED

Champaign-Urbana Mass Transit District recorded a 70% decrease in new-hire accidents **in their first year of simulation-based training.** 



OVERALL ACCIDENT REDUCTION

Central Florida Regional Transportation Authority ("LYNX") reported a 69% overall reduction in accidents **after adopting a simulation-based training program.** 



#### WASHED OUT WASHOUT

MTA New York City Transit's Department of Buses saw a 35% reduction in the washout rate of new hires completing training **after the introduction of the MB 2000.** 

# Simulation is beneficial to both student and Instructor.

"Simulation allows students the opportunity to navigate a world of potential hazards without the consequence of an actual collision. It also gives the Instructors a chance to not only teach the fundamentals of driving a transit bus in a safe environment, but also to assess a student's performance when presented with challenging situations that can't be replicated on the road."

WILLIAM "BILLY" CAMERON Fmr. Division Chief of Training - Bus & Rail Massachusetts Bay Transportation Authority (MBTA)

#### Learn more at www.faac.com/transit

FAAC SIMULATION TRAINING CASE STUDIES

### Training Results with Lasting Implications for Safe Operation

When NYC MTA incorporated an MB 2000 simulator into their training program, they tracked new-hire operator statistics for the first 90 days of training & route familiarization:

#### WITHOUT SIMULATION TRAINING

709 students

226 total accidents

**48** right-side accidents

31.9% accident rate

VS WITH SIMULATION TRAINING

- 177 randomly selected
- 32 total accidents
- **0** right-side accidents
- 18.1% accident rate

OVER TIME, SIMULATOR-TRAINED STUDENTS HAD AN ACCIDENT RATE REDUCTION OF 43%

## The Efficiency of a Dual Cab Simulator in a Mobile Unit

Texas Association of Counties used a dual cab simulator in a mobile unit to train law enforcement personnel and truck drivers across the state. Here's what they accomplished in four years:

Counties Covered 134	LE Personnel Trained 2,336	Truck Drivers Trained <b>1,505</b>					
Pre-Simulator Liability Claims \$6,370,958	<ul> <li>Post-Simulator</li> <li>Liability Claims</li> <li>\$5,102,458</li> </ul>	Total Saved After Four Years \$1,268,500					
TOTAL SAVED COVERED: SIMULATOR COSTS, INSTRUCTOR SALARY, COST OF OPERATION							

#### Return on investment isn't limited to savings from accidents averted.

"Training simulations... run anywhere from 30 seconds to a couple minutes... So, if [the students are] having trouble with right turns, left turns, soft stops, hard stops—that's where the advantage starts to come out on the side of training on the simulator... In just a minute or two, I can do a repeat three to five times in a sim. In a traditional bus, I'm not going to be able to do that."

STEVE BERRY Fmr. General Manager for Public Safety at St. Louis Metro





FAAC Incorporated is an ISO 9001 :2015 & CMMI Level 3 certified company.



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