

JOYGLOBAL

P&H

P&H® ProMiner Training Simulators





ProMiner Training Simulators

Realistic virtual training simulators allow operators to learn the machine's controls quickly and safely, as well as master the entire process from start to finish, before they ever step foot into a real-world piece of machinery. Training simulators lead to less machine downtime, fewer accidents, and a more efficient and productive operation.

ProMiner Training Simulators allow both new and veteran operators the ability to safely train in a no-risk environment where mistakes cost nothing, and machinery down-time is completely eliminated. Operators optimize their productivity within the simulation where they have freedom to try out different mining techniques, and receive detailed result statistics.



New Operator Training

Each ProMiner Training Simulator is designed to train new operators who have never operated P&H equipment before. The simulators purpose is to help develop muscle memory while using the correct techniques necessary to operate the equipment in a productive and non-destructive manner.

To immerse operators into the experience, the simulators are designed with the highest visual fidelity and realism. Using actual equipment controllers, operators can manipulate the equipment and experience all of the other everyday operations you would expect. Feedback from experienced operators has been used to make the feel of the simulated actions mirror the real-life equipment. For additional realism, simulators feature visual effects found in retail video games, including deformable terrain, particle systems, and physics-based visual effects.



Personalized Instructor Led Training

Tutorial modes are included so that operators who are new to the equipment can be guided through accomplishing basic actions. From setting up a drill string, learning how to propel the shovel, to performing pre-inspections on a wheel loader. These tutorials give the user the instructions and confidence they need to train without an instructor being present.

Performance Report				
Simulation Time		0:00:00		
Total Tonnage		00.0		
Times	Total	Avg	Best	Goal
Cycle:	0:00:00	0:00:00	0:00:00	0:00:30
Digging:	0:00:00	0:00:00	0:00:00	0:00:11
Swing Loaded:	0:00:00	0:00:00	0:00:00	0:00:08
Dump:	0:00:00	0:00:00	0:00:00	0:00:02
Return to Tuck:	0:00:00	0:00:00	0:00:00	0:00:10
Propelling:	0:00:00			
Counts				
Swinging While Digging:	0			
Stage 1 Boom Jacks:	0			
Truck Impacts:	0			
Crawler Impacts:	0			
Boom Bump Stop Impacts	0			
Dipper Over Truck Canopy:	0			
Truck Overloaded:	0			
Export		Restart		Exit

Training Reports

Training reports are important to effective simulation training. ProMiner Training Simulators provide feedback for the operator to help identify their strengths and weaknesses. At all times during a simulator session, real-time performance data is being collected and tracked. The simulators allow operators to monitor themselves in real-time then, generates a performance report at the conclusion of the session, providing greater insight into the individual operator's performance.

The bottom line is that the ProMiner Training Simulators, while emphasizing safety, are designed to maximize operator muscle memory, efficiency, and productivity.

For further information on any of P&H's ProMiner Training Simulators, please contact your local Joy Global service office.

Series I and II Shovel Training Simulators

The Series I and II Shovel Training Simulators feature the ability to perform cab or blind side loading of material into pre spotted mining trucks. Real world digging conditions apply as the operator is required to reposition the shovel to the face as material is removed. Both simulators automatically position the trucks as the shovel is moved to maintain optimal digging performance.

The simulators determine the amount of material heaped in the dipper based on a mathematical algorithm. This total dipper capacity per fill is indicated along with ongoing truck payload capacity in real time on the screen.

The simulators track and report the following information to aid in new and experienced operator development:

- Tonnage loaded
- Cycle time
- Digging time
- Swing loaded time
- Dump time
- Returning to truck time
- Swinging while digging
- Stage 1 boom jacks
- Stage 2 boom jacks
- Truck impacts
- Crawler impacts
- Boom bump stop impacts



Series I Shovel Training Simulator

The Series I Shovel Training Simulator provides a real world feel in a very compact package. The simulator uses a 17" laptop, HDMI cable included for connection to large screen monitor, and real world Joystick Controllers that clamp to almost any table top making it easy to set up in any environment.

The Series I Simulator is protected by a rugged heavy duty case. Incorporated into the case are locking clasps, a telescoping handle, and rugged casters making this simulator easy to transport while keeping it safe.

Series II Shovel Training Simulator

The Series II Shovel Training Simulator is made to be setup easily yet gives the operator a more realistic feel for the machine. To provide the operator with the same comfort and control used on the actual equipment, the simulator uses a PC computer, real world Joystick Controllers and Operator Seat to run the simulation. This, combined with three 46" HD monitors, delivers a realistic experience for any new or experienced operator trainee.

The Series II Shovel Training Simulator is supported by an all-aluminum two piece chassis designed to fit through a standard size doorway. Heavy grade casters are used to maintain system portability. Each caster features a leveling foot that can be used to hold the simulator stationary while in use.

Already have a Sereis II Shovel or Wheel Loader Simulator but not enough room to accomodate two full simualtors? Options are available to order only the seat section to convert your existing Series II Simulator to the other machine type. Contact your local Joy Global service office for more information.



Series I and II Loader Training Simulators

The Series I and II Wheel Loader Training Simulators were created to feature real-world digging conditions and the ability to load material from a virtual rock face into pre spotted mining trucks.

Material weight and Cycle times are calculated and tracked. These measurements are indicated in real time on the screen providing performance feedback to the user.

The simulator tracks and reports the following information to aid in new and experienced operator development:

- Tonnage loaded
- Cycle time
- Dump time
- Propel to bank time
- Digging time
- Propel to truck time
- Service brake too soft
- Articulated while digging
- Hit dig face too hard
- Dumping too high into truck bed
- Not square to dig face
- Safety shutdown procedure



Series I Loader Training Simulator

The Series 1 Wheel Loader Training Simulator provides a real world feel in a very compact package. Using a 17" laptop and real world controls that clamp to almost every table making training available wherever and whenever they need it. An HDMI cable is also provided to extend the simulator to a larger monitor.

The Series I Simulator is protected by a rugged heavy duty case. Incorporated into the case are locking clasps, a telescoping handle, and rugged casters making this simulator easy to transport while keeping it safe.

Series II Wheel Loader Training Simulator



The Series II Wheel Loader Training Simulator has similar features to our Series II Shovel Simulators giving the user a more realistic feel for the machine. To provide the operator with the same comfort and control used on the actual equipment, the simulator uses a PC computer, Head tracking device, real world Joystick Controllers and Operator Seat to run the simulation. This, combined with three 46" HD monitors, delivers a realistic experience for any new or experienced operator trainee.

Series II Wheel Loader Training Simulator is supported by an all-aluminum two piece chassis designed to fit through a standard size doorway. Heavy grade casters are used to maintain system portability. Each caster features a leveling foot that can be used to hold the simulator stationary while in use.

Already have a Series II Shovel or Wheel Loader Simulator but not enough room to accommodate two full simulators? Options are available to order only the seat section to convert your existing Series II Simulator to the other machine type. Contact your local Joy Global service office for more information.



Series I Drill Training Simulator

The Series I Drill Training Simulator allows operators of different skill levels to benefit from using the simulator. A tutorial mode is provided for operators that have little experience operating a P&H Drill. The tutorial mode provides step-by-step instructions on how to perform basic drill functionality such as raising the mast, drilling a hole, and assembling the drill pipe string. An experienced mode allows more seasoned operators to perform the same functions without the step-by-step instructions.

Connected to a pair of real world Joystick Controllers, the simulator mirrors the actual equipment, allowing the operator to learn everything from operating the breakout wrench, pipe racks, bit air system, and various other components of the drill. The time of day feature allows operators to learn how to use the drill in limited light conditions. A local and remote propel mode allows operators to practice operating the drill from inside or outside of the cab.

The simulator tracks and report the following information to aid in new and experienced operator development:

- Session time
- Setup time
- Positioning time
- Time per hole
- Drill bit depth
- Rotary RPM

In addition to performance data, the simulator also records and reports on the following events:

- Rotary overcurrent
- Hoist overcurrent
- Regrinding



The Series I Drill Training Simulator provides a real world feel in a very compact package. The simulator uses a 17" laptop, HDMI cable included for connection to large screen monitor, and joysticks that clamp to almost any table top making it easy to set up in any environment.

The Series I Simulator is protected by a rugged heavy duty case. Incorporated into the case are locking clasps, a telescoping handle, and rugged casters making this simulator easy to transport while keeping it safe.





JOYGLOBAL



All designs, specifications and components of the equipment described above are subject to change at the manufacturer's sole discretion at any time without advance notice. Data and descriptions published herein are informational in nature and shall not be construed to warrant the service or the suitability of the equipment for any particular purpose as performance may vary with the conditions encountered. The only warranty applicable is our standard written warranty for this equipment or service.

Joy Global, P&H and Joy are trademarks of Joy Global Inc. or one of its affiliates.
© 2012 Joy Global Inc. All rights reserved.



joyglobal.com