Jacobsen Declaration Exhibit AY

Train Tools® Software

Model railroad software for command and control

- *Networked or stand alone operation*
- *Multiple programs may run at the same time*
- *Supports Windows Mobile Wireless devices*
- *Windows XP compatible*

KAM Industries

www.kamind.com

Microsoft CERTIFIED Partner

Train Tools® Software

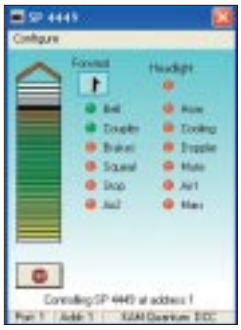
Solutions for the computerized model railroader

Train Tools software is a family of software products, modular in design, and internet ready. KAM's software allows manual operation to full dispatching packages. With Train Tools software, you pick the software you need to control your model railroad.

Engine Commander® Software

Engine Commander is a visual throttle that allows you to manually control locomotives, switches, read sensor status and program CV's and speed curves.

Connect screen



128 Step throttle

When you design an automated layout, there are a number of configuration options that you need to look at. Engine Commander is an excellent test tool using easy to use visual throttle, switches, sensor and multiple fast clocks.

Fast Clock

Engine Commander has these features:

- Multiple command station support
- Visual Throttle, Switch Plates, and Signal
- Fast clock support
- Speed curve and CV programming
- Networked enabled, operates locally or across the internet

Engine Commander gives you all of the control operations you need to get your railroad up and running in the shortest time possible. Engine Commander will run on Windows XP Systems and support tablet on touch screen computers.

Switch Plates

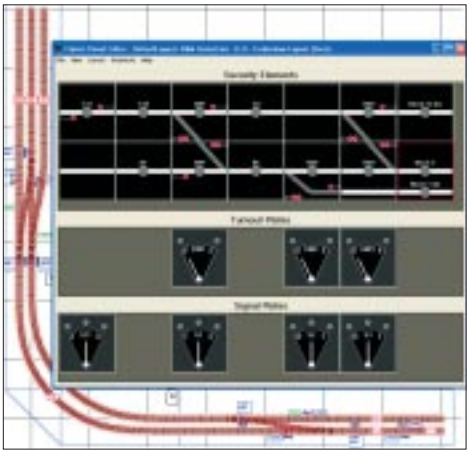
Classic Panel® Software

Classic Panel is a 1940 dispatcher's panel that allows you to easily manage the accessories, signals, and sensors on your railroad. Classic Panel is shipped with three components

- Train Server
- Classic Panel (the DCC layout control application)
- Classic Panel Editor

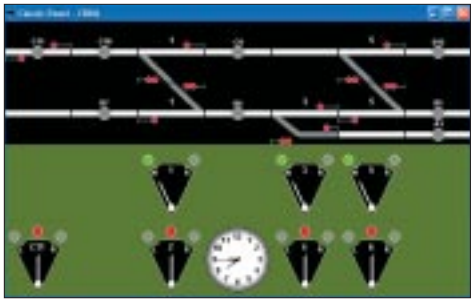
Classic Panel allows a user to act as the Dispatcher to control the routing of trains. A "Dispatcher" resides in a centralized office and is responsible for granting/denying permission to locomotives to pass through sections of track with safety in mind so as to avoid collisions or derailments.

Track sensors out in the field are used to determine where a train is located and illuminate a light on a graphical representation of the layout in a control panel viewed by the Dispatcher. The Dispatcher uses this train location information to remotely control the track turnout directions, as well as the color of signals seen by the train operators.



Classic Panel Editor and a diagram of the layout being edited

Classic Panel® Software is designed to emulate a 1940-style dispatcher panel, but more importantly, it's designed to make it simple to control your DCC model railroad layout. Properly controlling the individual lights on track signal posts in order to safely direct locomotive travel without derailments or collisions can be tricky using low-level DCC commands. (For example, it's easy to inadvertently set invalid LED states such as granting two opposing trains permission to collide head on.) Classic Panel encapsulates the complex logic for signaling, turnouts, and interlocking (which will be explained later) so that you can concentrate on managing the entire layout instead of micro-managing the low-level DCC commands.

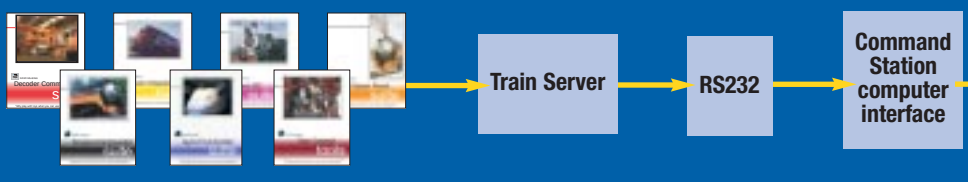


Classic Panel runtime with fast clock

Classic Panel Software was designed based on user feedback and user experience on other dispatching products. Classic Panel Software is a professionally designed software package that is easy to configure and easy to use. Classic Panel Software offers these features

- Advanced visual layout editor to easily configure a layout for point-and-click DCC control.
- Ability to print a summary report containing your layout configuration and all DCC settings.
- An easy to use application for controlling your layout without having to write software scripts to micro-manage low-level DCC commands.
- Multiple levels of interlocking support.
- Easy to use and powerful tools to debug and troubleshoot your layout configuration.
- Shared real-time DCC status information across any number of Train Server enabled applications.
- Integrated support for Sensor and Signal Decoders (SE8C as well as CMRI devices).

HOW DOES OUR SOFTWARE WORK?



- All KAM software has a 1 year free upgrade from time of purchase
- KAM supports all popular command stations.
- Modular product design — run one or all programs at the same time.
- Products support Windows XP and later systems

Train Control® Tools – RailDriver Commander® Software

Driving a train is fun! What better way to do that than with a joy stick modified to act and feel like a real locomotive throttle. The Rail driver hardware is manufactured by PI Engineering (see www.raildriver.com).

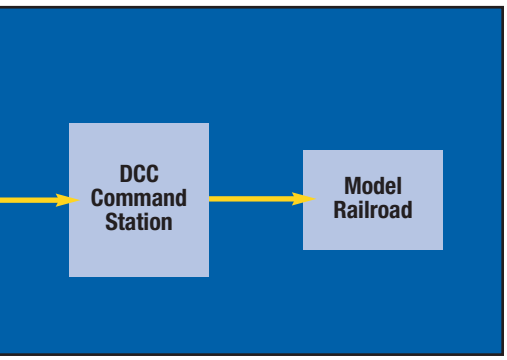
Rail Driver CAB console from PI Engineering

KAM software integrates the RailDriver cab console into your DCC layout using Train Server. Rail Driver Commander software runs on your local system, or across the internet.

RailDriver Commander is fun to run. The software is fully configurable. You can map any loco or switch function to the unit. The figure below shows an example of mapping loco and switch functions to the Rail Driver CAB console.

Rail Driver Commander Setup Screen

KAM's Raildriver Commander allows you to control all of the functions of a locomotive. Add your favorite sound files, and a loco video source – and you are the train driver. Can you think of a better way to drive your DCC railroad?



Loco CE® Software

There have been many different solutions for wireless support for model railroads. All of these solutions are complex, expensive, and are not user friendly. Loco CE solves this problem as well as many others with its easy to use interface.

Throttle with QSI template

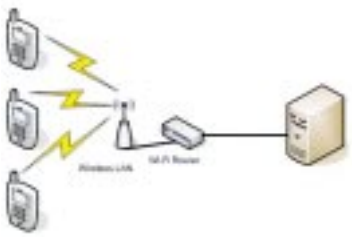
Loco CE is fully wifi and Bluetooth enabled. Loco CE was designed to work with Train Server, and integrate into other Train Server enabled applications. For example, you may have a dispatcher running Classic Panel or Computer Dispatcher Pro, and have train driver using Loco CE. When information changes on the dispatcher panel or the PDA, information is updated to the command station and all connected clients. This capability is unique with KAM software, and makes it simple to control your model railroad layout.

Loco CE offers these capabilities:

- Multiple command stations support.
- Walk around throttle with a wireless PDA.
- Control locomotives.
- Control turnouts.
- Program locomotives and speed curves.
- Assemble double headers.
- Fast clock support.

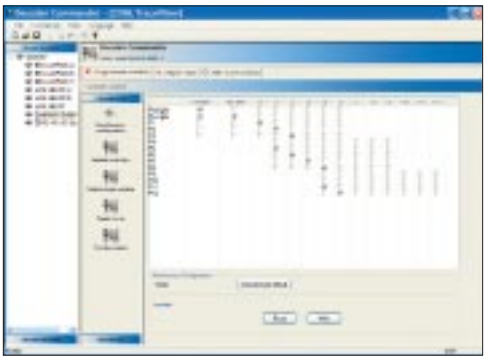
Occupancy Signals

Loco CE with Train Server is cool to operate and use to control your railroad. Once you use Loco CE and a touch screen, you will see why we say "With Loco CE, control is in the palm of your hand".



Decoder Commander®

Programming Decoders is a critical job, and has been done in the past with software that was not well designed, or handhelds that have a very poor user interface. KAM has looked at programming decoders for a number of years, and have placed the most common functionality in Engine Commander and Loco CE.



Decoder Commander function mapping.

Decoder Commander is the full-featured decoder programming software package. We added features to decoder commander that make the application easy to use for the novice users, but advanced enough for those users that require that capability. Decoder commander features these capabilities.

- Easy to use programming interface
- Displays data in hex or decimal (user can customize)
- Capability to create user templates for decoder customization
- Easy to use cloning wizard in setting up new locos.
- Simple to use advance function programming
- Full consist setup and advance function control
- Full report printing capability
- Distributed network support

Decoder Commander is best programming software on the market today. This software programming tool is designed for model railroaders so you can focus on your railroad rather than your control software.

Wizard Programming Screens

Visit www.kamind.com for additional information

Layout Commander®

There are many different ways to run a model railroad. You can manually dispatch the layout with Classic Panel, or a full dispatcher program such as Computer Dispatcher Pro. The other popular way to run a model railroad is to use automatic train control, to program routes using a drag-n-drop metaphor.

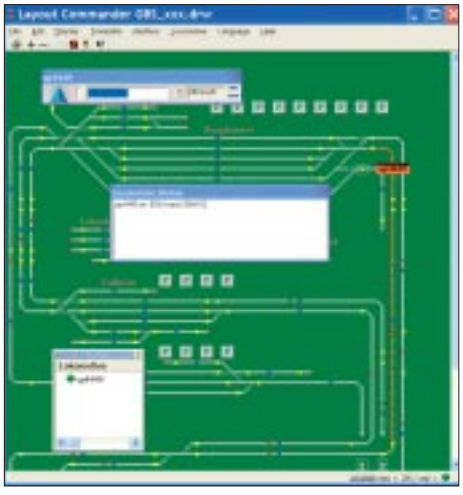
To start automatic operation, locomotives are positioned on the layout. Sensor positions are evaluated; turnouts and other locomotives' positions are collected. This information is used to calculate the train speed and direction.

Digitrax Certification Layout

Layout Commander has the following capabilities for automatic train operation:

- Automatic train control with route selection
- Time table operation with fast clock
- Multi media support for entry and exit events
- Programmable routes, allow stored train movements
- Triggered events supporting PC Sound
- Train prioritization (passenger, Switcher, Freight)

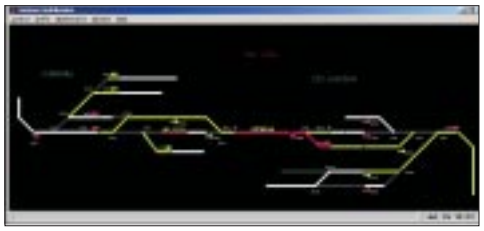
Layout Commander is built on a control philosophy that use stations (or hold points) as stopping areas for trains. Stations are an area between two sensor points where train speed is monitored and adjusted.



Large automated layout with routing

Computer Dispatcher® Pro

Train Driver Professional is a commercial software application that was designed for the American railroads in the 80's. This software was in operation on 21 class I railroads in the United States and in Western Australia. The software is still in use today and its primary focus is the light rail systems in the US.



Dispatcher screen with signal support

KAM has updated Train driver professional and has converted the software to DCC. The hobbyist version is called Computer Dispatcher Pro. CD Pro has all of the commercial dispatching attributes, and has been extended to support KAM's XML Train Server interface.

Computer Dispatcher Pro is the only real dispatcher program for model railroads. Train movements are tracked and updated on the dispatcher screen. CD Pro allows the model railroad layout to be subdivided into different dispatcher territories. The Dispatchers displays integrates signals switches and occupancy sensors.

Computer Dispatcher Pro offers the following features for the model railroad hobbyist

- Multiple territory support
- Integrated security login for dispatchers
- FRA compliant historical tracking log
- Train tracking capabilities along with auto position update
- Integrated with Train Server

Consist Commander®

Consist commander manages locomotive operations on your layout for local and distributed systems. This capability is unique to Train Server, and is not available for any other software offering. Consist Commander is a must for any distributed network that has more than one client operating a layout over the internet. KAM pioneered this technology in the late 90's to address large distributed system control. Consist Commander manages consist and individuals locomotives on a layout.

Signal Commander®

Controlling signals and setting up aspects are challenging at the best of times. One of the new challenges in distributed connected systems is the ability to coordinate multiple layouts that are integrated into a large railroad. KAM pioneered this technology in the late 90's to address large distributed systems. KAM's signal command solves this problem, and allows different model railroads to be dispatched from a distance and exchange information on the layout operation.

Developer Tools

All Train Tool software is shipped with developer programmer manuals on the CDROM. KAM ships the software in this manner so you have access to the same technology that KAM uses to develop their software. KAM knows that great software tools allow great applications to be developed.

KAM also offers a professional developers kit which allows access to the developer's web site. Developers can purchase Train Server distribution CDROM to ship to their customers. KAM supplies developer tools for the latest Microsoft Visual Studio product, and interface specification for third party applications.

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