

PEEK ADR-3000 PLUS SUPPORTIVE SOFTWARE

Of importance to the user of modern counters/classifiers is the operating and reporting software, which supports, controls, and formats the collected data. A user-friendly Windows software package is available to complement the Peek ADR-3000 Plus. This software is the Traffic Operations Planning Software (TOPS) program, which is available from Peek.

The TOPS program provides multi-file processing, stores data files into a single database for easy file sharing among TOPS users, allows for edit and preview of reports before printing, collects and processes data from both the ADR and 241s, enables remote or local setup of Peek ADR units and collection of data by direct manual connection or by the added functionality of automatic telemetry polling of field sites via modem connection (auto polling and weigh-in-motion support are add-in options). The TOPS program reads all files and generates a suite of daily, weekly and monthly reports. A user-definable classification function, within the program, provides the ability to customize classification scheme and to transfer the new scheme to the Peek ADR-3000 Plus. Processed data may be exported to various other software packages.

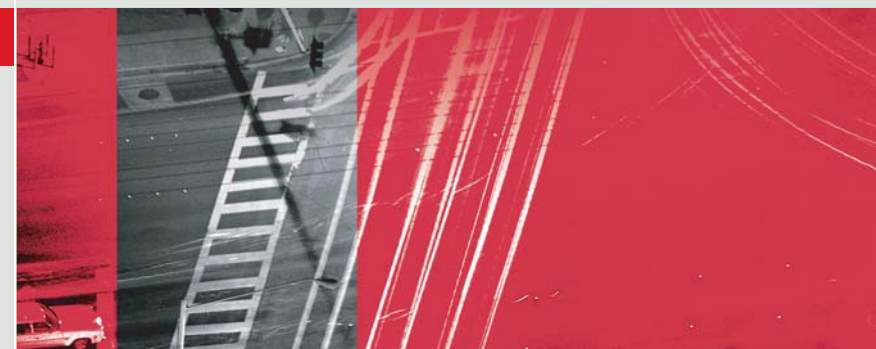
TWO YEAR LIMITED WARRANTY

Peek Traffic warrants this product against manufacturing defects in materials and workmanship for two years from date of shipment from Peek Traffic. Specific contracts and regional laws may vary or alter these terms.



SPECIFICATIONS

Characteristic	Description
Weight	Less than 15 pounds.
Dimensions	5.25"H x 10" to 19"W x 9.35"D (135mm x 255mm to 480mm x 240mm)
Temperature range	-40°F to +165°F (-40°C to +74°C)
Display (optional)	20 character x 4 line liquid crystal display.
Inputs	64 sensor inputs of various types allowed.
Count rate	200 counts per second (per input).
Recording intervals (historical)	<ul style="list-style-type: none"> ▶ 1, 2, 5, 6, 10, 15, 30, and 60 minutes. ▶ 2, 3, 6, 12, and 24 hours (real time). ▶ Four daily peak periods available.
Recording intervals (StopWatch+)	<ul style="list-style-type: none"> ▶ 10, 15, 20, and 30 seconds. ▶ 1, 2, 3, 4, 5, 10, 15, 20, 30, and 60 minutes.
Microprocessor	Intel 80C186
Capacity	Approximately 3,280 days of volume data.
Accuracy	±1 count per record per sensed input.
Communications	RS232 serial port with selectable baud rates between 300 and 19,200 via UL and CSA approved female socket, optionally available with up to 5 ports available and baud rates up to 115,200.
Optional features	<ul style="list-style-type: none"> ▶ Solar power. ▶ Front panel keypad and display. ▶ Up to 8 sensor input modules or 64 inputs, which can be a combination of loop, piezo, or contact closure inputs. ▶ PCMCIA memory card. ▶ Multi-comms cards allowing up to five communication ports. ▶ Opto-output for controlling external devices triggered by user-configurable vehicle parameters. ▶ Lightning panel to provide surge protection.



DATA COLLECTION

The Federal Government has stepped up funding into the deployment of systems that focus on enhancing the security and reliability of our surface transportation system. The three key aspects of these systems are the collection of data, data sharing and integration, and the operational use of the resulting information.

There is a real and urgent need to be able to collect and disseminate realtime information on all principal arterials, freeways, key roadways, critical bridges, tunnels and evacuation routes to support security management and emergency evacuation response. On a day-to-day basis, this information would also support improved congestion management and incident response, enhanced travel time reliability, improved safety and better overall operational performance of the transportation system.

StopWatch+ is a new application developed and introduced by Peek Traffic to help address these objectives. StopWatch+ provides the advanced functionality of a traditional and proven Peek ADR 3000, with regards to the collection of historical data for planning purposes and a second independent function for real time data gathering that operates simultaneously.

StopWatch+ is able to communicate and provide real time traffic data with other devices and software that are designed to monitor various events and occurrences. An RS232 port and a simple communications protocol allows StopWatch+ to be easily interfaced with:



STOPWATCH+™

REAL-TIME TRAFFIC COUNTER/ CLASSIFIER FOR INCIDENT AND EMERGENCY MANAGEMENT

Emergency Evacuation Systems

- ▶ Hurricane Evacuation systems.
- ▶ Natural disasters.
- ▶ Man-Made disasters.

Incident Management Systems

- ▶ Industrial accidents.
- ▶ Rail emergencies.

Weather Management Systems

- ▶ Flooding.
- ▶ Icing.
- ▶ Fog.
- ▶ Snow.

Road Temperature Management Systems

- ▶ Security surveillance and management systems.
- ▶ Military routing systems.

It is certain that these devices use a wide array of communication methods such as wireless, modem, satellite, LAN, and fiber. StopWatch+ can seamlessly integrate with these devices to provide a powerful system that monitors such events and the resulting real-time traffic flows. And by doing so, StopWatch+ provides a comprehensive, yet very cost effective, data gathering solution.

The StopWatch+ application enhances the operation of the industry standard ADR 3000 to also process Count, Average Speed and Occupancy data over a user-defined recording period. This enhanced operation is totally independent from the ADR's historical data collection studies. For instance, the ADR can be configured for a historical study collecting classification by speed by lane data in 15 minute intervals while the StopWatch+ application is configured to process count, average speed and occupancy data every 20 seconds. Note that the recording period for the ADR historical study can be configured independently from the recording period used in the StopWatch+ application. With its dual communications ability, both studies can be monitored simultaneously.



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MAKING THE WORLD A SAFER PLACE TO TRAVEL



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STOPWATCH+™

REAL-TIME TRAFFIC COUNTER/ CLASSIFIER FOR INCIDENT AND EMERGENCY MANAGEMENT

StopWatch+ can be configured to process any combination of count, average speed and occupancy data on up to 16 lanes (or 32 overall flows). The StopWatch+ data can be optionally combined into individual flow totals, lane (or sensor array) totals, directional totals or an overall site total.

The recording period is configurable from 10 seconds up to 60 minutes.

BENEFITS

- ▶ One device performs the work of two.
- ▶ Easy set up and operation.
- ▶ ADR 3000 is a reliable, proven, industry standard.
- ▶ Real time StopWatch+ application runs simultaneously and independently.
- ▶ Both the historical and StopWatch+ applications can be configured independently.
- ▶ Dual comms enable simultaneous monitoring of both functions.
- ▶ Can be retrofitted into existing ADR 3000 Plus products.
- ▶ Provides axle classification.
- ▶ Low power consumption means it can be deployed at remote sites.
- ▶ Can process data in both directions of a lane allowing monitoring of lane reversals.
- ▶ Proven deployment in flood monitoring applications.
- ▶ Optional lightning panel provides surge and lightning protection to meet NEMA TS-2 standards.
- ▶ An optional opto-isolated output is available to control external devices (such as a VMS).

FUNCTIONALITY

The Peek ADR-3000 Plus, with StopWatch+ capability, provides optimal functionality as a permanent site unit. The StopWatch+ application allows the ADR 3000 Plus to run two applications simultaneously:

The ADR 3000 Plus unit provides up to 8 studies that incorporate user-defined headings (for historical data purposes).

The StopWatch+ application runs a concurrent study based on count, average speed and occupancy on up to 16 lanes, with a totally independent recording interval from the historical data.

For example, the ADR3000 Plus can run a historical study of class by lane in 60 minute intervals, while the StopWatch+ application is configured for count, average speed and occupancy in 15 minute intervals. With various options, the ADR-3000 Plus can count up to 64 or classify up to 32 lanes of traffic, including up to 24 WIM sensor inputs.

Several exclusive features incorporated into the ADR-3000 Plus illustrate its capabilities for integration with complex ITS and new technology applications.

The CPU electronics are fitted with a replaceable socket mounted fuse, protecting against an accidental power reversal and subsequent damage. Front panel mounted LEDs indicate a successful start up of the microprocessor and provide a "heartbeat" indication to operators. LEDs also warn of system fault conditions and indicate communications port activity and status.

Additionally, mounted on the front panel is a reset switch used to re-start the CPU. This provides an easy method of restarting a unit during diagnostics. Each unit can perform up to 8 studies, plus per vehicle records such as classification by speed, by lane, and volume. The type, configuration, and format of data to be collected can be custom programmed or selected from menu-driven choices.

Available data types include per vehicle records, per lane data, vehicle classification by axle, speed, length, gap, headway or any combination. Vehicles can be classified according to Scheme F or a user-defined custom classification scheme.

FEATURES

- ▶ Permanent rack mounted traffic counter/classifier/WIM.
- ▶ Simple to set up and operate.
- ▶ 2 MB onboard memory.
- ▶ Multi-lane operation.
- ▶ PCMCIA memory option for additional data storage.
- ▶ Up to 64 inputs with a variety of sensor options.
- ▶ Scheme F or custom classification.
- ▶ High-speed communications and telemetry.
- ▶ U.S. standard or metric units.
- ▶ Optional integrated control panel with LCD readout.
- ▶ Solar power options.
- ▶ Battery "sentinel".



ADR-3000 PLUS 19" unit

QUALITY ASSURANCE TESTING

Peek products are tested for correct operation during a computer controlled environmental chamber test cycle, based on the NEMA TS-2 standard for traffic controllers. An optional lightning panel allows surge and lightning protection for all input circuits to the NEMA TS-2 standard.

OPERATIONAL CHARACTERISTICS

The Peek ADR-3000 Plus is a modular multilane vehicular traffic counter/classifier that can be configured and operated either remotely via telemetry or directly in the field via a computer with appropriate software. The optional front panel mounted keypad and display provides autonomous local control. Setup and operational performance of the Peek ADR-3000 Plus is enhanced for simple and reliable field traffic data collection. Easy to use menus allow configuration flexibility. Preloaded setup files reduce complexity and operator errors. Collected data is held secure from unintentional erasure or loss.

PHYSICAL DESCRIPTION

The Peek ADR-3000 Plus is an instrument rack-based unit, expandable by function with individual plug-in modules. Available to fit standard EIA 19" or Type 170 enclosures, the Peek ADR-3000 Plus may also be shelf or panel mounted. Electrical connections (external) are via rear mounted terminal strips for sensor inputs. Communications are supported via an RS232-C DB-9 connector. Plug-in modules can consist of power supply, central processing unit, communications, keypad and display, memory, loop sensors, piezo WIM sensors, contact closure inputs, analog to digital inputs or any combination of these to meet multiple applications. Individual plug-in modules are Eurocard in size with DIN standard connectors. Power options include 115 VAC, 6 or 12 VDC, solar power and optional battery-backup as necessary. An internally supported hardware real time clock maintains time/date regardless of unit power, for up to 10 years.

