

MetroCount Signature System



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Demonstration

Regular

Plus

Batch

Phase

MetroCount

Australia
P.O. Box 1182
Fremantle WA 6959
Ph: 08 9430 6164
Fax: 08 9430 6187
Email: sales@metrocount.com

United Kingdom
Unit 29, Rosemont Road
Wembley, Middlesex
London HA0 4PE
Ph: 020 7833 4767
Fax: 020 8938 3039
Email: uksales@metrocount.com

United States
18200 Georgia Ave, Suite J
Olney MD 20832
Ph: 800 576 5692
Fax: 866 440 8407
Email: usasales@metrocount.com

www.metrocount.com

Overview

How the MetroCount Vehicle Classifier System Works...

MetroCount have created a sophisticated interaction between the hardware and software components of the MetroCount Vehicle Classifier System that allows us to offer a variety of option levels.

Each Roadside Unit has an *Authenticity Signature* that identifies the option level you have purchased. Traffic data files created using MCSurvey/MCSetup then inherit this option level. Other programs in the MetroCount Traffic Executive (MTE) software are then able to change the available features based on the option level of the files you load.

MetroCount Plus

The *Plus* option level has access to all currently available software features. *Plus* supports Traffic Executive's (Version 3.1) FULL output range (excluding Phase timing analysis reports) for both counting and classifier functions (i.e. all reports/graphs available excluding Phase timing analysis reports).

MetroCount Regular

The *Regular* option level supports *Axle & Gap counting*, and also *standard classifier functionality* with simple text-based speed/class reports (including Weekly Vehicle Counts, Daily Classes, Class Speed Matrix, 15 Min Speed / 15 Min Class reports) & Flow graphs..

MetroCount Base

The *Base* option level supports *Axle & Gap counting* (two channels, with dual/split mode support)

MetroCount Demonstration

The *Demonstration* option level is designed only for evaluating the MetroCount Vehicle Classifier System. It has the same functionality as the *Plus* option level with the limitation that reports created in MReport using data files created by a demonstration unit *will not print*. To evaluate printed reports, simply analyse one of the *Demo F* or *Plus* data files supplied on your Traffic Executive CD in the 'Demo Data' folder. Data files created by a demonstration unit are identified by the type *Demo L*.

MetroCount Batch

Batch processing is an add-on to any Option Level.

MetroCount Phase

Provides access to special *Phase* reports.

Upgrading your MetroCount Vehicle Classifier

One of the best features of the **MetroCount Signature System** is that a Roadside Unit's option level can be upgraded instantly, either via fax or email. If you wish to have a *Demonstration* unit upgraded or upgrade a *Regular* unit, for instance, we simply supply you with a new *Authenticity Signature* and any new files you create will have your new option level.

Old files can be upgraded to your new option level, but only by MetroCount. Contact us for details about our File Signing Service.

Detailed Description

The MetroCount Vehicle Classifier System is a sophisticated combination of both hardware and PC-based software, and is comprised of the following components:

- MetroCount Roadside Unit,
- MetroCount Traffic Executive, and
- MetroCount Signature System.

Supplied with...



MetroCount
Traffic Executive
software

Understanding the Signature System

Roadside Unit Signature

The **MetroCount Signature System** is a unique interaction between the hardware and software of the MetroCount Vehicle Classifier System that allows for a variety of software options.

Each MetroCount Roadside Unit has a digital Signature stored internally that identifies the software options purchased for that unit. When you unload data from the Roadside Unit, the data file created is "signed" with the Unit's signature. Other programs in MTE are then able to dynamically change the available analysis features based on the Signature types of the data files you load

Every MetroCount data file is traceable to a unique Roadside Unit. A data file's digital Signature is based on the Roadside Unit's identifier and therefore prevents this from being altered.

Using Traffic Executive's "MCReport" traffic analysis module and MetroCount's proven time-stamped individual axle approach, you can easily analyse the speed, vehicle type (car, van, bus, truck, etc), headway, gap, and more, of *every* vehicle entering the intersection, *all* relative to the signal phases.

Roadside Unit models since the MetroCount 5500 *Series* support the **MetroCount Signature System** and are fully compatible with MTE.

The Signature Types

A MetroCount digital Signature consists of a type and several options that can be combined with any type.

At present, the Signature types consist of **Base**, **Regular**, **Plus**, **DemoL** and **DemoF**, all with the option of Scripting. Each Signature type has a set of reports and features that are enabled in components of MTE.

DemoL and **DemoF** are special Signature types. **DemoL** is used for demonstration purposes. Data files produced by a **DemoL** Roadside Unit allow all of MTE's features to be accessed, except for printing. **DemoF** are specially created demonstration files with unrestricted access to reports and features

Upgrading Signature Types in the Roadside Unit

A great feature of this Signature system is that a customer can upgrade the type without returning the Unit to MetroCount. Users can start with a base model and then upgrade as their needs change. A new Signature is simply installed into the MetroCount Roadside Unit, using MCSetup or MCSetLite. Any new datasets created by that RSU will have the new Model Type, including data currently within the RSU.

Upgrading Signature Types in Existing Data Files

With the **MetroCount Signature System** any saved/archived data collected using a Regular model, for instance, can be upgraded to another Signature Type such as **Plus**. This allows flexibility and power to analyse all existing MetroCount data - extracting and interrogating more information provided by the new upgraded signature type. That means gaining the ability to produce better, more complete reports, charts and graphs even YEARS after the survey has been run. Contact MetroCount for information on our "File Signing Service".

Details of the MetroCount Signature Types

Regular models

As a standard speed and class Classifier, the MetroCount **Regular** signature not only supports Axle & Gap counting, but also standard classifier functionality with simple text-based speed/class reports (including Weekly Vehicle Counts, Daily Classes, Class Speed Matrix, 15 Min Speed / 15 Min Class reports) & Flow graphs.

This is suitable for entry level classifying, where limited text reports are all that are necessary. However, MetroCount believes that this reporting level would still exceed software features provided from any competitor offering standard classification. Also, please note MetroCount can upgrade the **Regular** model to the **Plus** model later - in the field!

Plus models

The most sophisticated classifier, the MetroCount **Plus** signature supports Traffic Executive's (Version 3.1) *FULL output range* (excluding Phase timing analysis reports) for both counting and classifier functions (i.e. all reports/graphs available excluding Phase timing analysis reports). This provides the most of the superb and extensive Windows 95/98/NT/2000/XP reports at a price which is only slightly higher than the **Regular**, which suits the traffic professional who requires high level analyses and full presentation graphs and tables.

Demo-L models

The **DemoL** (demonstration) model is designed for evaluating the MetroCount Vehicle Classifier System free-of-charge. **DemoL** has the same functionality as the **Plus** option level with the limitation that reports created in MCRReport using **DemoL** datasets will not print or copy to other applications. To evaluate printed reports, clients may simply analyse one of the **DemoL** (special demonstration datasets) or **Plus** datasets supplied on the Traffic Executive CD. Alternatively, MetroCount can manually sign a Client dataset gathered by a **DemoL** Classifier Unit to render its reports printable. This way MetroCount has protection against a system's overuse by clients, but full flexibility to convert the unit at their premises to a saleable system.

MetroCount Batch Option Level

The **Batch** option level can be added to any of the other option levels, and allows automatic, batch mode analysis. This feature is chiefly targeted at larger end users with several Classifier Units, where batch operation can deliver significantly improved data turnaround times.

The above lists the advantages of the **MetroCount Signature System** to users, but the system allows even greater flexibility for you, including greatly reduced price for acquiring stock, reduced customs charges, reduced levels of multi-model stock required, on-site conversion of demonstration equipment to saleable units, risk-free demonstration units, etc. These are described further in the **DemoL** resale stock section.

MetroCount Phase Option Level

The **Phase** option level is available for MetroCount 5700 Series Timing Analysis Roadside Units, and provides access to the Phase reports in Traffic Executive.

Complete Listing of Reports (MTE v3.16)

The following tables specify the MTE v3.16 software reports available for each Signature Type; a useful guide for determining which model best suits your specific and informational needs.

Classification Reports

The following is a list of Classification reports and their required Signature type.

Report Name	Base	Regular	Plus	Comment
TABLES				
User Defined Vehicle Reports				
Custom List Report			✓	Custom build your own text list reports (also useful for export to other programs; eg via XML transform).
Formatted Vehicle Reports				
Weekly Vehicle Counts	✓	✓	✓	Table of hourly vehicle counts, peaks and averages. One week per page.
Weekly Vehicle Counts (Virtual Week)			✓	Table of hourly vehicle counts, peaks and averages. Compressed into 1 week.
Vehicle Counts	✓	✓	✓	Report optimised for vehicle counts. Variable drop intervals and totals.
Vehicle Counts (Virtual Day)			✓	Report optimised for vehicle counts. Compressed into 1 day.
Daily Classes		✓	✓	Class volumes and percentages of daily and weekly flow.
Daily Classes by Direction		✓	✓	Class volumes and percentages of daily and weekly flow including directional split.
Daily Classes (Estimated Mass)			✓	Class volumes and percentages of daily and weekly flow with estimated masses.
Class Speed Matrix		✓	✓	Table showing speed vs class, with totals.
Speed Separation Matrix			✓	Table showing speed vs separation, with totals.
Rolling Day Totals			✓	Daily volume and speed summary in rolling format.
Individual Vehicles			✓	List of each vehicle showing time, direction, speed, class, wheelbase, headway, gap, axles, groups and wheel picture.
Queued Vehicles			✓	List queues showing lead and trailing vehicles.
Stop-Light Violations			✓	Individual Vehicle report of vehicles detected under a given condition, such as the red-light phase of a rail crossing.
Speed Statistics			✓	Speed statistics tables.
Speed Statistics by Hour			✓	Speed statistics table, in virtual mode, averaged over the available data.
Separation Statistics			✓	Separation statistics tables.
Separation Statistics by Hour			✓	Virtual day of separation bin distribution with mean.
Data Scan			✓	Used for validation of a single data file, primarily intended as an automated data check for Batch processing..

Phase Reports		
Custom List Report	May only be created using data unloaded from 5700 Series Roadside Units, with a new signature type.	A special version of the Custom List report also supports Timing Analysis. Any of the Custom List's features can be applied to selected vehicles using the Phase Map.
Data Phase Report		The Data Phase report displays individual vehicles, interspersed with phase timing. Phases can be disabled in the Phase Map to show only vehicles in phases of interest.
Phase Statistics		The Phase Statistics report displays MCRReport's standard speed statistics block for each phase in the Phase Map, and for all phases combined.

CHARTS

Vehicle Data Verification Reports				
Spectrum of Axle Hits			✓	Chart showing logarithm of sensor hit times.
Correlation of Axle Hits			✓	Chart showing vehicle correlation between sensors.
Audit of Data Quality			✓	Chart showing sensor balance and axle hit quality.
Axle Position Histogram			✓	Axle distribution within vehicles.
Environmental Test			✓	Chart showing logarithm of sensor hit times including actual sensor hit values.

Time Based Vehicle Plots				
Vehicle Flow	✓	✓	✓	Plot of integrated vehicle flow vs. time.
Velocity Dispersion			✓	Plot of velocity dispersion with time.
Speed			✓	Plot of mean speed with min/max limits, including Virtual Day and Virtual Week options.
Flow Stacked by Class			✓	Plot of flow segregated by class.
Flow Stacked by Speed Bins			✓	Plot of flow segregated by speed bins.
Flow Clustered by Class			✓	Plot of flow segregated by class.
Flow Clustered by Speed Bins			✓	Plot of flow segregated by speed bins.
Separation			✓	Plot of separation (as headway or gap).

Dispersion Plots				
Lane Occupancy			✓	Plot showing lane occupancy and capacity.
Speed vs Separation			✓	Plot of traffic speed vs separation.
Volume vs Speed			✓	Plot of traffic volume vs speed.
Density vs Speed			✓	Plot of traffic density vs speed.
Density vs Volume			✓	Plot of traffic density vs volume.

Binned Charts				
Class Bin Chart			✓	Interactive chart showing class bins.
Speed Bin Chart			✓	Interactive chart showing speed bins.
Speed Histogram			✓	Speed distribution and summary showing closest normal distribution.
Notional Speed Limit			✓	
Wheelbase Histogram			✓	Vehicle wheelbase distribution and closest normal distribution.
Separation Histogram			✓	Separation distribution as a function of traffic volume.

Phase Charts				
Phase Spectrum	May only be created using data unloaded from 5700 Series Roadside Units, which have a new signature type.	The Phase Spectrum report is useful for examining the distribution of time between trigger events.		
Phase Flow		The Phase Flow report represents average vehicle volume versus time from the start of a Phase Map cycle. Each phase is indicated by a vertical line on the chart.		
Phase Speed		The Phase Speed report shows average vehicle speed versus time from the start of a Phase Map cycle.		

SPECIAL

Standard Vehicle Formats				
Florida SPS Class		✓	✓	Florida DOT Survey Processing Software, class format.
Florida SPS Vehicle Volume	✓	✓	✓	Florida DOT Survey Processing Software, volume format.
PRN Class Format		✓	✓	
PRN Directional Volume		✓	✓	
PRN Speed Format		✓	✓	
QDOT 60 Minute Report		✓	✓	
QDOT 15 Minute Report			✓	
FHWA VTRIS Class Report		✓	✓	
FHWA VTRIS Vehicle Volume Report		✓	✓	
TNZ Class Report		✓	✓	Transit New Zealand class report.
MRWA Vehicle Report			✓	MRWA Individual Vehicle format.

Event Count Reports

The following is a list of Event Count reports and their required Signature type.

Report Name	Base	Regular	Plus	Comment
TABLES				
User Defined Event Reports				
Event List Report			✓	A customisable tabular report for event count data.
Formatted Vehicle Reports				
Weekly Event Counts	✓	✓	✓	Table of hourly event counts, peaks and averages. One week per page.
Weekly Event Counts (Virtual Week)		✓	✓	Table of hourly event counts, peaks and averages. Compressed into one week.
Event Counts	✓	✓	✓	Report optimised for short-term count surveys.
Event Counts (Virtual Day)		✓	✓	Report optimised for short-term count surveys. Compressed into one day.
CHARTS				
Event Count Verification Charts				
Spectrum of Axle Hits			✓	Chart showing logarithm of hit times.
Piezo Test Report	May only be created using data unloaded from a 5740 Roadside Unit, which have a new signature type.			This report instantly characterises piezo installation behaviour over time.
Event Flow	✓	✓	✓	Plot of integrated event volume vs time.
SPECIAL				
Exotics				
Punched Tape	✓	✓	✓	Fischer Porter tape in 15 min bins.
Standard Event Count Formats				
Florida SPS Event	✓	✓	✓	Florida DOT Survey Processing software, axle count.
FHWA VTRIS Event Count Report	✓	✓	✓	
PRN Event Format	✓	✓	✓	
GR00 Event Count Report	✓	✓	✓	

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Australia
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United Kingdom
Unit 29, Rosemont Road
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London HA0 4PE
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