



MetroCount 5711 and 5712 Timing Analysis Roadside Units for intersection monitoring...



Measure the hazards, know the risks

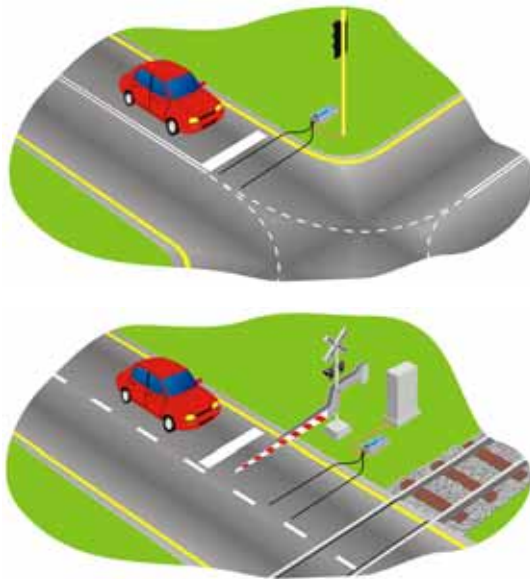
Do you need to determine the hazard ranking of traffic signal intersections and rail level crossings?

With our new MetroCount 5711 and 5712 Timing Analysis Roadside Units, we have completely revolutionised intersection and level crossing monitoring and hazard ranking. Instead of relying on sparse collision data to make your assessments, you can now monitor the behaviour of *all* drivers.

The MC5711 and MC5712 both use MetroCount's latest two-channel technology. Installed at signal controlled intersections, pedestrian crossings and rail crossings, and readily interfaced to the signals, they record traffic data on one channel and signal changes on the other.

How the system works

The MC5711 and MC5712 gather time-stamped axle data for every vehicle on "Channel 0", using two air tubes spaced one metre apart and approximately 200mm on the junction or crossing side of the stop line. (Note: non-metric users may use a tube spacing of three feet.)



The two-channel MetroCount 5711 and 5712 for detailed analysis of signalised intersections and rail crossings.

The system monitors traffic on one channel using air tubes, while the other channel monitors the signal phases.

The difference between the MC5711 and MC5712 is how Channel 1 connects to the intersection controller: the MC5711 has direct electrical connection, while the MC5712 has a non-contact optical connection.



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Measure driver behaviour

Monitor level crossings

Assess the risk of collisions

Black spot studies

Software included

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The second channel, Channel 1, simultaneously logs the signal timing. You configure two triggers, for instance, one on the start of Yellow (ie pre Red), and one at the start of Green. As the signals change, these triggers are instantaneously transmitted and stored in Channel 1 in a simple cycle (Yellow-Red-Green).

Timing analysis with "Traffic Executive"

As with our other traffic monitoring systems, we include our world-leading Traffic Executive software package with the MC5711 and MC5712 at no extra cost, completing the system.

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.

Supplied with...



MetroCount
Traffic Executive
software

Supplied with...

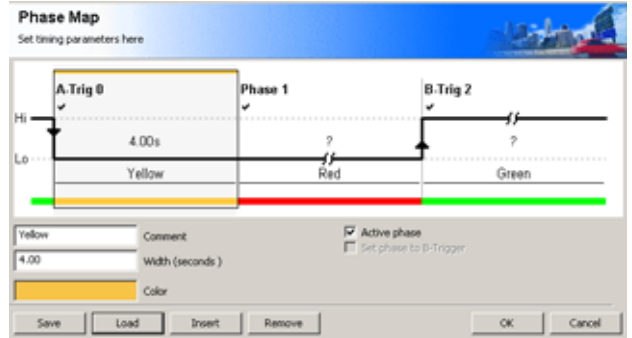


MetroCount
Traffic Executive
software

MReport's Phase Map

Signal timing is interpreted using MReport's new "Phase Map". The Phase Map is entirely user-controlled *after the survey*. You setup a Phase Map to match the surveyed intersection, then command MReport to calculate statistics relative to it. You define and name timing channel triggers and additional *fixed* timing phases to your Phase Maps. For example, given a fixed yellow time of four seconds, the complete Yellow-Red-Green cycle can be deduced.

You can create and save as many Phase Maps as you need, applying common Phase Maps to other survey locations, or even hypothetical Phase Maps to examine different effects and treatments against the same data.



MReport's Timing Analysis Reports

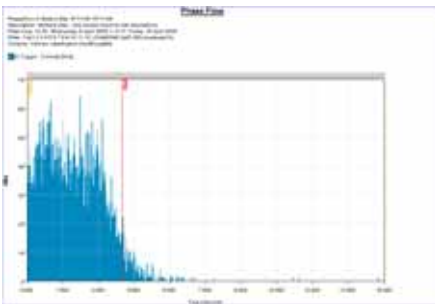
MReport now includes a range of detailed timing analyses and reports for traffic signals and controlled railway crossings (timing analysis can also be applied to controlled pedestrian crossings).

Vehicles can be selected in the "phase reports" by enabling and disabling phases in the Phase Map. All the normal vehicle filtering of MReport is still available.

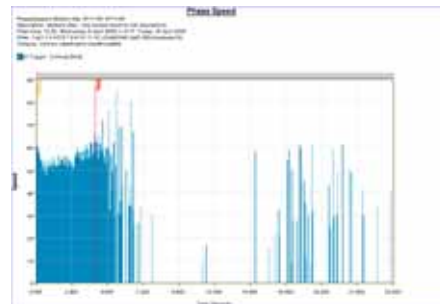
Other survey applications where there is a detectable timing parameter can also be displayed. For instance traffic behaviour during icing conditions could be investigated with an on-road temperature switch. Other environmental conditions, such as rain or lighting level, could also be used.

DS	Axle	Num	Ht	YYYY-MM-DD	hh:mm:ss.000	Dr	Speed	Nb	Hdwy	Gap	Ax	Gp	Rho	Cl	Nm	Vehicle
00	00000112	01	2005-04-06	13:18:29.977	AT				12.6							N/A Yellow
01	0000093d	04	2005-04-06	13:18:32.210	AB		53.9	2.7	5.8	2.2	2	2	1.00	1	00004042	SV o o
01	00000941	04	2005-04-06	13:18:33.068	AB		60.3	2.8	0.9	3.1	2	2	1.00	1	00000020	SV o o
00	00000112	01	2005-04-06	13:18:33.977	AT				4.0							N/A Red
01	00000945	04	2005-04-06	13:18:34.311	AB		31.5	2.7	1.2	0.3	2	2	1.00	1	00000010	SV o o

Data Phase report - individual vehicles with phase timing



Phase Flow report, demonstrating a tail into the red phase



Phase Speed report, showing an increasing speed trend approaching the red phase



Phase Speed report, showing driver behaviour at the beginning of the green phase

Phase = [Yellow + Red + Green]	
Vehicles = 6858 (100.00%)	
Posted speed limit = 60 km/h, Exceeding = 12585 (18.82%), Mean Exceeding = 66.96 km/h	
Maximum = 157.4 km/h, Minimum = 5.0 km/h, Mean = 36.6 km/h	
85% Speed = 61.6 km/h, 95% Speed = 68.4 km/h, Median = 30.2 km/h	
20 km/h Pace = 10 - 30, Number in Pace = 28867 (43.18%)	
Variance = 427.29, Standard Deviation = 20.67 km/h	
Phase = Yellow	
Vehicles = 5180 (7.75%)	
Posted speed limit = 60 km/h, Exceeding = 2370 (45.75%), Mean Exceeding = 66.68 km/h	
Maximum = 118.7 km/h, Minimum = 9.6 km/h, Mean = 54.6 km/h	
85% Speed = 68.0 km/h, 95% Speed = 73.1 km/h, Median = 59.0 km/h	
20 km/h Pace = 52 - 72, Number in Pace = 3340 (64.48%)	
Variance = 229.63, Standard Deviation = 15.15 km/h	
Phase = Red	
Vehicles = 314 (0.47%)	
Posted speed limit = 60 km/h, Exceeding = 168 (53.50%), Mean Exceeding = 72.76 km/h	
Maximum = 112.5 km/h, Minimum = 5.1 km/h, Mean = 53.4 km/h	
85% Speed = 77.0 km/h, 95% Speed = 85.3 km/h, Median = 61.6 km/h	
20 km/h Pace = 60 - 80, Number in Pace = 139 (44.27%)	
Variance = 560.36, Standard Deviation = 23.67 km/h	
Phase = Green	
Vehicles = 61364 (91.78%)	
Posted speed limit = 60 km/h, Exceeding = 10047 (16.37%), Mean Exceeding = 66.93 km/h	
Maximum = 157.4 km/h, Minimum = 5.0 km/h, Mean = 35.0 km/h	
85% Speed = 60.5 km/h, 95% Speed = 67.3 km/h, Median = 28.8 km/h	
20 km/h Pace = 9 - 29, Number in Pace = 28315 (46.14%)	
Variance = 411.77, Standard Deviation = 20.29 km/h	
Timing Statistics	
A Trigger = 10968	
Yellow = 43872.0 sec (5.8%)	
Red = 225268.4 sec (29.5%)	
B Trigger = 10969	
Green = 482313.4 sec (63.3%)	
A-A [Yellow-Yellow] Maximum = 3324.639, Minimum = 27.098, Mean = 69.509	
A-B [Yellow-Green] Maximum = 85.725, Minimum = 16.912, Mean = 24.539	
B-B [Green-Green] Maximum = 3325.140, Minimum = 4.704, Mean = 69.504	
B-A [Green-Yellow] Maximum = 3306.411, Minimum = 8.973, Mean = 44.971	

Phase Statistics report for each phase, and combined phases

* Virtual Day (7) [Yellow + Red + Green]													
Time -/n	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12
0000	7	42	39	0	2	0	0	0	0	0	0	0	0
0100	7	29	29	0	0	0	0	0	0	0	0	0	0
0200	7	17	17	0	0	0	0	0	0	0	0	0	0
0300	7	18	17	0	0	0	0	0	0	0	0	0	0
0400	7	34	33	0	1	0	0	0	0	0	0	0	0
0500	7	118	111	1	3	1	0	0	0	0	0	0	0
0600	7	317	297	7	7	1	2	0	2	1	1	0	0
0700	7	540	500	11	11	5	2	2	6	1	1	1	0
0800	7	705	660	14	8	5	3	2	8	1	3	0	1
0900	7	553	518	9	10	5	2	2	5	1	1	0	0
1000	7	505	470	9	13	2	2	2	5	0	1	0	0
1100	7	508	474	8	10	3	4	2	6	0	1	0	1
1200	7	479	447	9	9	3	2	1	6	1	1	0	0
1300	7	469	439	8	9	2	3	2	4	1	0	0	1
1400	7	493	466	8	9	3	2	1	4	0	1	0	0
1500	7	519	483	11	8	3	3	2	5	1	1	1	0
1600	7	526	492	9	7	4	3	1	8	1	1	0	0
1700	7	485	458	7	7	4	2	2	4	0	0	0	0
1800	7	435	416	3	6	1	2	2	3	0	0	0	0
1900	7	297	289	2	3	1	0	1	2	0	0	0	0
2000	7	184	180	1	1	0	0	1	0	0	0	0	0
2100	7	151	148	1	2	1	0	0	0	0	0	0	0
2200	7	114	112	0	1	0	0	0	0	0	0	0	0
2300	7	65	62	0	2	0	0	0	0	0	0	0	0
07-19	7	6217	5824	106	107	41	30	22	62	6	11	4	4
06-22	7	7166	6738	116	120	44	32	23	67	7	12	4	1
06-00	7	7345	6913	116	123	45	32	23	67	7	12	4	1
00-00	7	7603	7159	118	130	46	32	23	67	7	12	4	1
* Virtual Week (1) [Yellow + Red + Green]													
Time -/n	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12
Mon	1	7315	6866	105	151	47	31	24	61	12	11	2	4
Tue	1	7582	7113	134	137	42	32	35	69	5	10	3	1
Wed	1	7993	7490	141	156	53	35	20	75	6	9	2	5
Thu	1	8603	8065	120	168	55	42	26	83	12	20	6	3
Fri	1	8742	8156	159	152	74	38	27	91	9	18	7	8
Sat	1	7098	6760	88	93	29	31	16	58	3	12	4	4
Sun	1	5887	5666	77	50	23	15	14	32	5	4	1	0
--	1	53220	50116	824	907	323	224	162	469	52	84	25	25
In profile: Vehicles = 53221 / 58520 (90.94%)													

Phase Custom List report, showing virtual day and week for yellow and red phases