

HI-TRAC[®] 100+

HIGH-SPEED TRAFFIC WEIGH-IN-MOTION & CLASSIFICATION SYSTEM



SYSTEM DESCRIPTION

The HI-TRAC[®] 100+ high-speed traffic data collection system provides a low cost means of recording vehicle classification and axle load data without interruption to traffic flow.

In the standard configuration two piezo electric sensors and one inductive loop are installed in the highway per lane of detection.

The system can be used as a statistical data device to record highway traffic loading or it can also be used as a screening weighbridge to identify overloaded vehicles in the traffic stream. The HI-TRAC[®] 100+ can be interfaced to traffic signals or diversion signs to intercept overloaded vehicles and to ANPR or CCTV camera systems.

The HI-TRAC[®] 100+ uses TDC Systems advanced loop profiling techniques to improve vehicle classification accuracy. Weight data is significantly improved with automatic temperature compensation algorithms.

“ The HI-TRAC[®] 100 system has been deployed on the UK Department for Transport (DfT) National Core ATDC and Weigh-in-Motion Census for the last 10 years. The DfT use the data from the HI-TRAC[®] systems to produce the UK National Transport Statistics. ”

FEATURES

- Weigh-in-Motion (WIM) & Automatic Vehicle Counter/Classifying (AVC) operation using advanced loop profiling techniques
- Classification of over 100 unique vehicle types as well as supporting UK DfT, FHWA, AUSTRROADS class schemes
- Vehicle-by-Vehicle (VBV) data storage
- Advanced temperature compensation algorithm ensuring accuracy of weight data
- High speed compressed vehicle data transmission at least 10,000 vehicles records per minute (typically 20,000)
- Eight Lane Operation
- Laptop (USB), Modem (RS232) Ports and Data (RS485) port
- GPRS, GSM Telemetry options
- Viewing of sensor waveforms for fault diagnosis via HI-COMM 100 software package
- Automatic Number Plate Recognition (ANPR) and CCTV camera interface.
- Environmental and Air Pollution monitoring interfaces



TECHNICAL INFORMATION

ACCURACY DATA

Gross Vehicle Weight	±10%
Individual Axle Weight	±15%
Group Axle Weight	±15%
Traffic Volume	>99.5%
Speed	±1.5%
Length	±8%
Headway	±7%
Speed Range	1 to 200 kph

Note: Gross vehicle and axle weight accuracy with 90% confidence.
Axle weight accuracy assumes road sensors installed in a surface compliant with COST 323 Class B(10) or ASTM E1318-02 specifications.

CLASSIFICATION ACCURACY

FHWA, UK DFT, AUSTRROADS, USER DEFINABLE

Motorbike	±95%
Cars & Vans	±97%
Cars & Vans + Trailer	±97%
Rigid HGV	±98%
Articulated HGV	±99%
Draw-Bar Trailers	±99%
Buses & Coaches	±97%

LANE CONFIGURATIONS

Piezo-Loop-Piezo	WIM or AVC
Piezo-Piezo	WIM, AVC, Bicycles

VBV DATA RECORDED

Time & Date	Direction of Travel
Site Identity Code	Vehicle Count Number
Lane Number	Vehicle Class
Individual Axle Weights	Gross Vehicle Weight
Vehicle Speed	Vehicle Length
Inter-axle Spacing	Wheelbase
Vehicle Gap	Headway
Equivalent Single Axle	Validity Code

STORAGE CAPACITY

256 Mb Flash Mass Storage Media Drive
Upgradeable to 4G

25,000,000 Vehicle VBV WIM Records – 256Mb
40,000,000 Vehicle VBV AVC Records – 256Mb

INPUT/OUTPUT PORTS

USB	Laptop (Front Panel Mounted)
RS232	Modem
RS232	Printer or ANPR/CCTV Control
RS485	Data Transmission
Dry Contact	Six N.O.
Switch Inputs	Two (e.g. door tamper switches)

POWER

85-264VAC @ 47-440Hz
12V Battery – Rechargeable via HI-TRAC 100
Solar Panel, Battery & Charge Regulator



SOFTWARE

HI-COMM 100 and HI-COMM EZY Compatible:
Data Download, Analysis, Real Time VBV View,
Report Generation & Diagnostics



Drakewell C2, C2 Web Reports



ROAD INSTALLED ITEMS

Piezo electric sensors and inductive loop sensors permanently installed in the highway.

DIMENSIONS & WEIGHT

W = 430mm (485mm with rack mount flanges)
D = 280mm (325mm with handles)
H = 180mm
7 kg

SHIPPING DIMENSIONS & WEIGHT

550 x 430 x 260mm (W D H)
9kg

CONTACT US

TDC Systems Ltd.

30 Lynx Crescent, Weston Industrial Estate
Weston-super-Mare, North Somerset BS24 9BP
England, United Kingdom

T: +44 (0)1934 644299 F: +44 (0)1934 644255

E: sales@tdcsystems.co.uk www.tdcsystems.co.uk

