

# ULTRA II D-TEK™

Vehicle Loop Detector

## FEATURES

- ULTRAMETER™ (displays optimum sensitivity setting / diagnostic aid)
- Frequency count/reset switch
- 10 sensitivity settings
- Loop diagnostics
- 4 operating frequencies
- Lightning and surge protection
- Frequency counter
- Fail safe Operation



## APPLICATIONS

The Ultra II D-TEK was designed to be a more compact, energy efficient, cost effective and reliable detector that is easier to install and setup.

Sensitivity selection is simplified by the ULTRAMETER™ display that indicates the appropriate sensitivity setting to detect the vehicle positioned on the loop.

The 10 sensitivity settings allow for finer adjustment of the detection level, while the 4 frequency settings provide greater flexibility in preventing crosstalk in multi-loop applications.

## INDICATORS & CONTROLS

### DIP SWITCH

4 positions that control frequency, ASB (automatic sensitivity boost) and Pulse/Presence (provides for reducing noise interference)

### SENSITIVITY

Rotary switch is used to fine tune adjustment of loop detection height.

### OUTPUT LED

The Red LED indicates the detection output status

### ULTRAMETER™

Visual indicator of optimum loop sensitivity setting

### POWER LED

During operation, the Green LED permanently ON indicates a normal operating condition; blinking indicates a loop failure condition.

### FREQUENCY COUNT SWITCH

Momentary push button to check operating frequency of the loop. (indicated by the Red LED blinking at 10 kHz per blink). May also be used to hard re-set the Ultra D-TEK

## ORDERING INFORMATION

### ULTRA II D-TEK

12 – 24 V DC and 24 V AC. I = 18 mA max.

### PR-XX

EMX Lite Preformed Loop XX =size

### LD-7P

7 position pluggable screw terminal adaptor to aid in wiring connections.

**EMX INDUSTRIES, INC.**  
4564 Johnston Parkway  
Cleveland, Ohio 44128

Telephone:  
1-800-426-9912  
216-518-9888

Fax: 216-518-9884

WEB: <http://www.emxinc.com>

Email: [salesupport@emxinc.com](mailto:salesupport@emxinc.com)

Technical Support: [technical@emxinc.com](mailto:technical@emxinc.com)

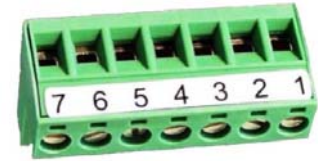
**EMX**  
INDUSTRIES, INC.

We accept Visa, MasterCard, American Express card orders and company purchase orders with approved credit.

# ULTRA II D-TEK™

The ULTRAMETER™ display makes installation, set-up and troubleshooting easy. Each time a vehicle is moved onto the loop, the display indicates the sensitivity necessary to detect vehicle. Simply set the sensitivity to the value displayed to detect the vehicle.

Interference or crosstalk from adjacent loops or other sources are displayed as a constantly varying number on the ULTRAMETER™. This condition may be avoided by maintaining a minimum of 5 kHz separation in multi-loop applications.



LD-7P

Pluggable 7 position terminal block

Pin

- |           |               |
|-----------|---------------|
| 1 = Loop  | 5 = Relay N/O |
| 2 = Loop  | 6 = Relay COM |
| 3 = Power | 7 = Relay N/C |
| 4 = Power |               |

## Technical Data

Power supply	12-30 VDC and 24 V AC (reverse polarity protected)
Current draw	18 mA max.
Dimensions	L= 3.0in (76mm) W= 0.9in (22mm) H= 2.75in (70mm)
Weight	0.15 lbs. (68g)
Loop Inductance	20...200uH (Q factor $\geq 5$ )
Environmental tracking	Automatic Compensation
Operating environment	-40° C... 82° C (-40° F... 180° F) 0...95% relative humidity
Housing material	PVC (Green)
Connection	Plug-in 7 Position screw terminal to aid in wiring.
Loop Compensation	Isolation transformer allows operation with poor quality loops
Loop Frequency	4 settings (low, med-low, med-hi, high)
Surge Protection	Loop circuitry protected by surge suppressors
ULTRAMETER™ Display	Indicates optimum sensitivity level, 0-9 Diagnostic aid
Output	Relay 1A@24VDC Common, Normally Open, Normally Closed.
Power / loop fault indicator	Green LED
Detect / frequency count indicator	Red LED
Frequency Count	To aid in detector set up and prevention of cross-talk
Pulse / Presence	Allows the relay output to send either a pulse output or have constant presence.
Sensitivity	10 levels 0-9
ASB (Automatic Sensitivity Boost)	Increases sensitivity after initial detection to prevent dropout due to high bed vehicles

Rev 2.1 04/17/2008

## WARRANTY

EMX INC. the product described herein for a period of 2 years under normal use and service from the date of sale to our customer. The product will be free from defects in material and workmanship. This warranty does not cover ordinary wear and tear, abuse, misuse, overloading, altered products, or damage caused by the purchaser from incorrect connections, or lightning damage.

There is no warranty of merchantability. There are no warranties expressed, implied or any affirmation of fact or representation which extend beyond the description set forth herein.

EMX Inc. sole responsibility and liability, and purchaser's exclusive remedy shall be limited to the repair or replacement at EMX's option of a part or parts not so conforming to the warranty. In no event shall EMX Inc. be liable for damages of any nature, including incidental or consequential damages, including but, not limited to any damages resulting from non-conformity defect in material or workmanship.