ROADCHECK™

FLATPACK TRANSPONDER

The ***ROADCHECK™*** Flatpack Transponder functions as a vehicle's short range communications device. Communication between vehicle-mounted trans-ponders and roadside mounted ***ROADCHECK™*** readers occurs at 500 Kbits per second, permitting data transfer between the roadside and vehicles traveling at highway speeds.

ROADCHECK™ Flatpack Transponders are suitable for every type of vehicle and application where portability is desired. Transponders are designed to be mounted securely on the interior surface of the vehicle's windshield, yet can be removed if desired.

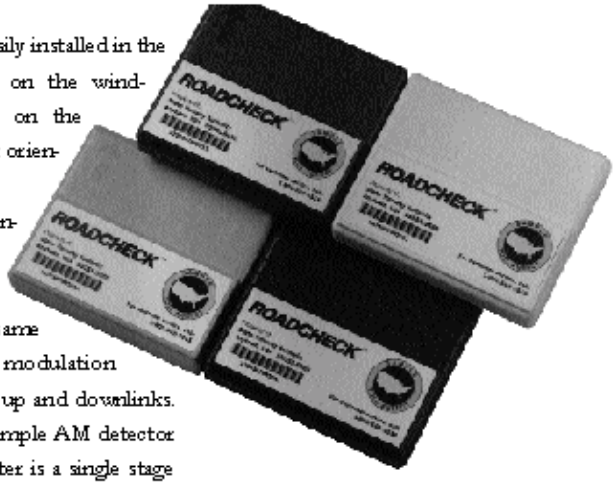
Installation of the Flatpack Transponder is quick and simple. Using adhesive-backed material, the transponder is easily installed in the correct position on the windshield. Markings on the case guide proper orientation.

The transponder is a half-duplex device which uses the same frequency and modulation scheme for both up and downlinks. Its receiver is a simple AM detector while its transmitter is a single stage on/off unit. This elegant design has consistently demonstrated excellent performance in testing and field operations.

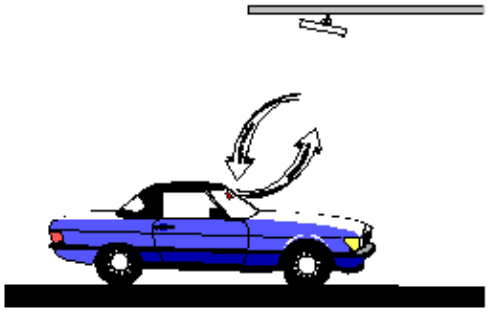
ROADCHECK™ semi-active technology employs a lithium battery as the transponder's source of power, giving the transponder a minimum life of 10 years, regardless of the number of interrogations it undergoes. The transponder casing is made of durable impact-resistant molded plastic and is available in different colors.

MARK IV ***ROADCHECK™*** transponders are highly suitable for Intelligent Transportation Systems (ITS) applications such as electronic toll collection, traffic monitoring and commercial vehicle operations.

The Flatpack Transponder has "read/write" capabilities and can store fixed, pre-programmed data as well as variable data added in real time as the vehicle passes a reader antenna at highway speeds. Partitioning between fixed, preprogrammed data fields and reprogrammable fields can be altered to suit the needs of the client. Closed toll systems operators can write



ROADCHECK® Flatpack Transponder
This compact transponder can be installed on any kind of vehicle quickly and easily. Available in different colors for different vehicle types.



The transponder mounts on the interior surface of the windshield, behind the rearview mirror. This maintains a clear view of the road for the driver, and communicates with antennas mounted above or alongside the road.

MARK IV

variable point of entry data into the transponder for subsequent toll payment calculations. Commer-cial vehicle operators can program vehicle load status information, vehicle maintenance and safety inspection dues dates, or other time sensitive data to improve their operational efficiency.

Highly secure automated vehicle access control can be achieved using ***ROADCHECK***™ Transponders and Readers by employing frequently updated passwords.

A combination of **MARK IV** transponder types may be employed in a common system to provide multiple levels and categories of service, while maintaining the lowest possible cost.

ROADCHECK'S high data rate ensures that advanced features can be implemented while maintaining high levels of system performance.

FLATPACK TRANSPONDER SPECIFICATIONS

Approx. Dimensions:	3.5" wide x 3.0" high x 0.6" deep (89mm x 76mm x 15mm)
Weight:	2.5 oz (70g)
Color:	Four colors: Pearl (White), Blue, Orange and Yellow
Data capacity:	256 bits (variable partition between fixed bits and bits programmable on the fly)
Data format:	Manchester keyed carrier
Error checking:	16 bit Cyclic Redundancy Check (CRC)
Data rate:	500 Kbits ± 10% per second (both uplink and downlink)
Data frequency:	915 MHz (nominal)
Trigger frequency:	915 MHz (nominal)
Mean radiated power:	1mW (nominal)
Operating temperature range:	-40° to +158° F (-40° to +70° C)
Service life:	10 years (no external power required)
Power source:	Internal lithium battery

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