

INSTRUMENTED

State-of-the-art Vehicles



INSTRUMENTED VEHICLE FLEET FOCUS

- Naturalistic & test track studies of rural traffic safety
- Human factors/field tests of rural traffic safety interventions
- Driver intervention assessments
- Simulator validation
- Teen and older driver research evaluations



PARTNERS

- National Science Foundation
- Murdock Charitable Trust Foundation
- Montana Department of Transportation
- College of Engineering, Montana State University
- Digital Artefacts

CONTACT

For more information, please contact

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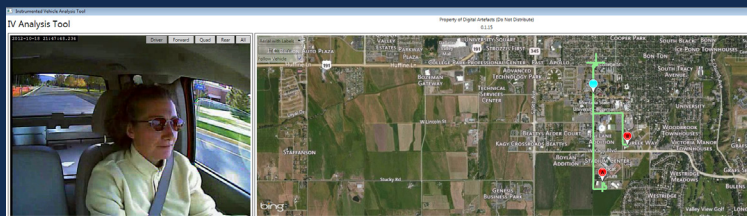
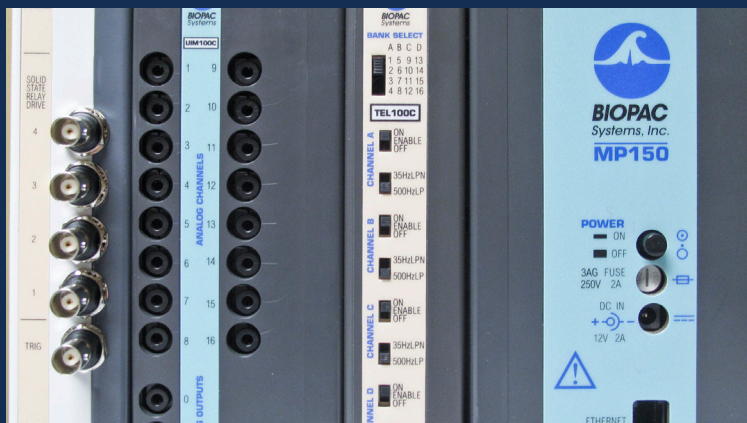
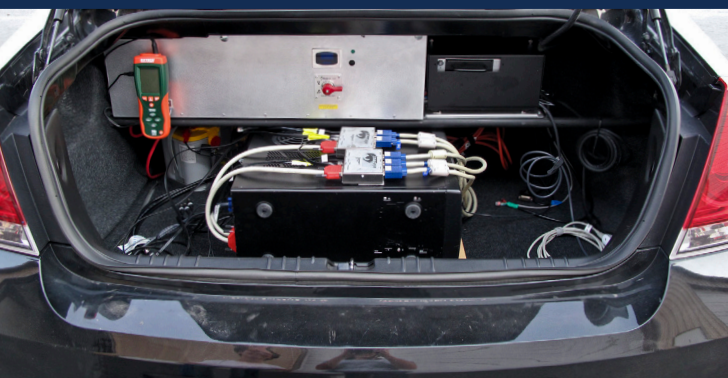
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www.westerntransportationinstitute.org/laboratories/fleet





Researchers at the Western Transportation Institute (WTI) at Montana State University utilize a state-of-the-art instrumented vehicle fleet for naturalistic studies of human factors and field tests interventions as they relate to rural traffic safety. The fleet is designed to address driver related factors in rural traffic fatalities. The instrumented fleet provides research capabilities enhanced by the integration of WTI's driving simulator, the WTI test track (TRANSCEND), and field studies.



Driver Behavior Eye Tracking System:

Smart Eye system gathers gaze direction and fixation data to determine where drivers are looking, as well as information about the user's face and eyes like head orientation, pupil diameter, blink rate, and eye closure levels.

Driver Behavior Physiological Assessments:

BioPac MP150WSW includes the ability to record a wide variety of autonomic nervous system functions that include; heart rate, skin conductance (also resistance), skin temperature, muscle tension (EMG), and neuronal activity (EEG).

Data Reduction:

Digital Artefacts Proprietary Data Visualization Software Tool takes information from the data recorded on the vehicles' data acquisition systems and provides visual outputs for all of the variables gathered. This allows researchers to visually determine patterns or trends.

Data Security:

All data is housed on separate dedicated secured servers. Confidentiality of all data is maintained per Montana State University's Institutional Review Board guidelines.